



Entrepreneurship in University
Environments

L'Environnement universitaire
de l'entrepreneuship



Entrepreneurship in Atlantic Canadian University Environments

An Examination of Models, Best Practices and Program Development

ENTREPRENEURSHIP IN ATLANTIC CANADIAN UNIVERSITY ENVIRONMENTS

PART II *An Examination of Models, Best Practices, And Program Development*

December, 2004

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The Consortium acknowledges the support of and contribution to this research and development project by the Atlantic Canada Opportunities Agency and we wish to express our appreciation.



Atlantic Canada
Opportunities
Agency

Agence de
promotion économique
du Canada atlantique

Canada

ISBN: 0-9736671-2-5

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Ce matériel est également
disponible en français :
**L'ENVIRONNEMENT UNIVERSITAIRE DE
L'ENTREPRENEURSHIP AU
CANADA ATLANTIQUE
– DEUXIÈME PARTIE**
*Un examen des modèles, des pratiques exemplaires
et de l'élaboration des programmes*

ISBN : 0-9736671-3-3

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EXECUTIVE SUMMARY

- Vesper and Gartner (1997:405-407) offer a benchmark to evaluate the level of Entrepreneurship Programs using four main criteria. These areas are (1) qualifications of faculty, (2) the variety and depth of the entrepreneurship curriculum, (3) academic standards and student scores, and (4) the quality and depth of resources.
- Universities use various methods to deliver Entrepreneurship Education including:
 - Team teaching
 - A combination of experiential and academic learning
 - Venture creation
 - Actual business consulting work
 - Mentorship
 - Cases and case competitions
- The norm for the development of an Entrepreneurship Program is where a single course is initially offered and then additional courses are offered to form a program (Menziez and Gasse, 1999:24). These courses can be designed according to the areas that encompass entrepreneurship knowledge. Menziez and Gasse (1999:7) divide entrepreneurship knowledge into three different stages: Orientation and awareness, New enterprise creation and Existing entrepreneur survival and growth.
- “Interaction with business owners is an important element of business education both for the in-school student programs and for adult training. Besides providing information about the realities of owning and working in a business, these individuals serve as role models for future business owners” (Vawdrey, 1987:30).
- Programs must be designed to facilitate an entrepreneurial environment if an entrepreneurial curriculum is to be applied.
- Experiential learning is emphasized in many prestigious Entrepreneurship Programs. “It was the experiential project work by students for community businesses which was the cornerstone of the whole operation. MBA’s believed that they learned more from live projects provided by local businesses than from more traditional written cases” (McMullan and Gillin, 1998:6).
- One key issue that an institution wishing to implement entrepreneurial studies has to face is where to place them. Currently, the majority are delivered through the Department of Business or Engineering. A number of the models offer the courses/programs across disciplines/departments.

- An entrepreneurial curriculum requires a focus on:
 - the future instead of the past
 - creativity instead of critical analysis; insight instead of knowledge
 - active understanding instead of passive understanding
 - emotional involvement instead of absolute detachment
 - manipulation of events instead of manipulation of symbols
 - personal communication and influence instead of written communication and neutrality
 - the problem or opportunity instead of the concept

- The majority of universities whose programs have been selected as models employ a faculty which combines excellent academic qualifications and successful experience as a practitioner (entrepreneur).

- University-based centres for entrepreneurship were evident in each of the models for Entrepreneurship Education differing only in the degree of involvement that they have in regards to creating an environment that will facilitate an entrepreneurial curriculum.

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I. OVERVIEW

A report entitled “Entrepreneurship Development in Atlantic Universities – Post Secondary Level”, undertaken by the Atlantic Canadian Opportunities Agency (ACOA), highlighted areas of concern regarding the availability of university programs geared towards Entrepreneurship Education. This concern is echoed by The John Dobson Foundation which states that “in recent years, we have had concern for limited entrepreneurship research in Canada; lack of sharing of entrepreneurship teaching methods; and lack of funds directed to the field. We think that more can be done at the university level” (Menzies: 1998: iii).

The ACOA paper indicated that a major step towards the development of successful entrepreneurs in Atlantic Canada, involves gaining the support of universities in Atlantic Canada, both anglophone and francophone, in working towards enhancing Entrepreneurship Education. As well, the paper suggests that it is important to partner with the universities to increase the promotion of entrepreneurship, to advocate for the development of Entrepreneurship Education and to create community extensions of entrepreneurship radiating from the respective institutions.

The paper outlined a number of actions that could be taken in order to create the above noted results:

- Identify the status of Entrepreneurship Education in the universities of Atlantic Canada
- Initiate activities designed to create an environment within universities that exposes learners to the opportunities and challenges of starting a business
- Encourage faculties outside of the faculty of Business to offer courses in entrepreneurship
- Prompt non-business students to consider venture creation as a career option
- Identify levels of entrepreneurship programming and levels of entrepreneurship awareness and advocacy activities
- Create an inventory of entrepreneurial resources

- Develop resources and programs for delivery of entrepreneurship education and programs
- Offer programs/services to both the students and the faculty

The purpose of the overall research project, “Entrepreneurship in Atlantic Canadian University Environments”, is to identify resources and programs that can address the gaps in Entrepreneurship Education, awareness, and advocacy at the university level as highlighted in the ACOA study. The main objective of this paper, “Part Two: An Examination of Models, Best Practices, and Program Development”, is to facilitate the creation of a delivery model of entrepreneurship for various levels of university education that will:

- Expose all students to entrepreneurship;
- Provide the information to support the creation of an entrepreneurial learning environment;
- Develop entrepreneurial characteristics/traits in students;
- Create awareness of venture creation as a viable career option; and
- Increase venture creation among students and graduates.

While this paper discusses best practices and offers guidelines for program development, it is suggested that Part One, the literature review, be read in order to put the development of a model for entrepreneurship education into context.

II. RESEARCH METHODOLOGY

The models of Entrepreneurship Education selected and described were taken from the list of universities measured in Vesper and Gartner's 1997 study titled "Measuring Progress in Entrepreneurship Education" and Menzies and Gasse's 1999 paper, "Entrepreneurship and Canadian Universities: Report of a National Survey of Entrepreneurship Education". It is important to note that both studies have suggested that the current methods used for ranking/rating university entrepreneurship studies are problematic. One major problem was that the criteria were not actually specified and those that were specified did not offer their specific weights.

The models selected were also reviewed by Dr. Monica Diochon, a researcher and professor of business and entrepreneurship at StFX University. The information included in the Appendices, one was prepared for each model, was taken directly from the university web-sites and augmented by information from Vesper and Gartner's 1999 Compendium of Entrepreneurship Programs. If no information was available for one of the headings (e.g.; regarding the mission and objectives of the program) it was not included in the description. The ESP model, Appendix 16, was included as an Atlantic Canadian model that based its program on University of Swinburne, one of the models included in the best practices section. It may offer a point of reference for methods of implementation of an entrepreneurship program into an established academic program or across all faculties. The Atlantic Colleges Committee for Entrepreneurial Development (ACCED) model, Appendix 15, was included as a potential method for raising awareness of, and training faculty in, creating an entrepreneurial learning culture.

III. MODELS AND PROGRAM DEVELOPMENT

The main objective of this paper is to facilitate the creation of a delivery model for entrepreneurship education that is relevant across disciplines within Atlantic Canadian universities. A thorough examination of the models selected for this project, those deemed to be the top programs as described in the research methodology, enabled the development of a number of best practices. The best practices gleaned from the models are discussed in detail throughout the paper. It is important to keep in mind that many of these models, especially those in the UK and Europe, are graduate programs. As most of the Atlantic Canadian universities are primarily undergraduate schools, there may not be a fit with any one model in its entirety. As well, many of these successful programs are funded by charging tuition fees that are much higher than those in Atlantic Canada. These issues do not suggest that adapting best practices is not possible, merely that financial and/or program constraints may play a major role in selecting practical and realistic options. If an effective option comes with a high price tag, methods of accessing financing may also have to be researched.

Before discussing models and best practices, it is important to note that it is crucial that the program planning and model development not be done until the surveys of administration, faculty, and students are complete and their needs and desires understood. The accepted principles of program planning in adult education require attention to needs assessment and negotiation of differing interests. The structure for program planning, accepted by theorists as the basis of good program planning (Cervero & Wilson, 1994, p.3), consists of the following five steps:

- Assessing learners' needs
- Defining objectives based on these needs
- Identifying learning experiences to meet those objectives
- Organizing the learning experiences
- Evaluating the program in terms of the objectives.

This process is similar to dominant curriculum development theory with the exception of the first step. Curriculum development focuses on four questions (Cervero & Wilson, 1994, p. 14):

- What educational purposes should the school seek to attain?
- What educational experiences can be provided that are likely to attain these purposes?
- How can the educational experiences be effectively organized?
- How can we assess whether the purposes are being attained?

It is the first step of effective program planning that is often overlooked in developing curriculum. It is understandable as assessing and addressing learners' needs, and balancing them with organizational needs and interests causes program planners the most difficulty. Cervero and Wilson capture and explicitly describe the program planners' dilemma,

“All planners know they are not free agents able to translate their own interests directly into the purposes, content, and format of a program. Rather, their planning is always conducted within a complex set of personal, organizational, and social relationships of power among people who may have similar, different, or conflicting sets of interests regarding the program. The planners' responsibility, and the central problem of [program planning], centre on how to negotiate the interests of these people to construct a program” (1994, p. 4)?

This dilemma cannot be ignored, or side-stepped, if the five steps of good program planning are to be applied to the development of a model for entrepreneurship education at the university level. In this case, the learners' needs assessment is being completed through the application of the student survey. The results of this survey, when compared with those of the university administration and faculty, will identify the interests and needs of each group, and should make clear any conflicting sets of interests. This information will enable those responsible for model development to more effectively negotiate the differing interests throughout the planning process. Anticipating and negotiating these divergent interests is key in the development of top-quality educational programs (Cervero & Wilson, 1994).

Once the needs assessment is complete, model development moves to the definition of program objectives and the selection of learning/teaching methods. The discussion of the best practices is organized in a manner that enables a logical progression through the planning process. Best practices are presented and discussed in components:

- Mission/Objectives
- Teaching Methods
- Design
- Faculty
- Centres for Entrepreneurship
- Other Vehicles for Facilitating Entrepreneurship
- Bureaucracy

Each element is discussed, its importance is outlined, and examples of best practices drawn from the models evaluated are presented. For a complete review of all models, the appendices (1-14) offer this information for each university program, organized using the same seven components. As a summary for the best practices, a table, outlining suggested uses/selection of certain components as they relate to specific needs, is offered as a guideline for model developers.

A. Mission/Objectives

According to Menzies and Gasse (1999:6), Entrepreneurship Education “adds a practical base to theoretic knowledge and it focuses attention on student talents and skills. It also motivates students to become more creative, innovative and improves a student’s ability to work with others in team initiatives.” This is echoed in many of the mission statements and objectives of universities which currently employ an entrepreneurial curriculum. For example, **Babson College** aims to provide their students with the skills and a “good bit” of the experience that they will need to begin their business career when they graduate. **McGill University** expands on this ideology by identifying five specific skill sets they aim to provide their entrepreneurial graduates to ensure post graduate success.

According to their mission statement, upon completion of the courses at **McGill University** students should be able to:

- Identify and state management obstacles specific to entrepreneurial settings.
- Design a strategic plan for an entrepreneurial venture from concept to realization.
- Employ innovative technologies necessary to grow a small business.
- Implement a plan for finding, managing, and growing a work team.
- Analyze potential markets and avenues by which to reach those markets.

The **University of Durham** agrees with **McGill University** objectives and uses a cumulative learning approach to accomplish this.

“Breaking the mould of traditional management education, this program is intended to create a stimulating and supportive environment in which individuals across all business and organizational sectors can explore entrepreneurship and develop and strengthen their entrepreneurial skills and behaviours”(Appendix 9).

The need for a non-traditional learning approach was also adopted in the mission statement of the **University of Southern California**.

“To help students develop an entrepreneurial attitude of being open to change, developing new ideas and thinking outside the box and beyond the limitations of existing paradigms. The blend of tools, skills and attitudes offered is intended to equip graduates with the ability to organize and manage new ventures” (Appendix 10).

It is important to note that the objectives and mission statements of the universities do not solely target business students for Entrepreneurship Education. Rather, they are complementary to the ideology put forth by Menzies and Gasse (1999) that entrepreneurship education encourages creativity, innovation and improves the student’s ability to work in a team atmosphere.

B. Teaching Methods

Universities use various methods in order to accomplish the objectives and mission statements of Entrepreneurship Education outlined by Menzies and Gasse (1999). The MBA in Entrepreneurship at the **University of Calgary** utilizes team teaching, with both academics and practitioners involved in delivering the entrepreneurship electives. A

number of these courses include hands-on experiential learning. The combination of experiential learning and academic learning are also used by the **London School of Business, Swinburne University, Vaxjo University** and **Durham University**. There are a number of ways to incorporate experiential learning into an entrepreneurial curriculum. For example, during their first year of studies, **Babson College** requires students to join a student team and create, run, and liquidate a business, with a \$3,000 start up loan from Babson. Another example of this is found in the manner that the University of Washington augments coursework and lectures by delivering practical and experiential learning through cases, a *High-Tech Entrepreneurship* speaker-series, case competitions, the Program in Entrepreneurship and Innovation (PEI) Club, venture creation, actual business consulting work and mentorship. Similarly, the **University of Southern California's** Majors program augments full-class lectures with small workshops and seminars, 'fireside' chats and networking events.

C. Design

The norm for the development of an Entrepreneurship Program is where a single course is initially offered and then additional courses are offered to form a program (Menziez and Gasse, 1999:24). These courses can be designed according to the areas that encompass entrepreneurship knowledge. Menziez and Gasse (1999:7) divide entrepreneurship knowledge into three different stages: orientation and awareness, new enterprise creation and existing entrepreneur survival and growth.

Hills (1988) concur with Menziez and Gasse (1999) in regard to program development based on entrepreneurial knowledge and provides three models by which to accomplish it. Hills (1988: 116-117) identified three emerging models for an Entrepreneurship Program. The first model is called the *business plan* because introductory courses focus on an overview of the business plan. However, for this model to fit into an entrepreneurial program, courses need to be created around the business plan instead of focusing on the business functions. The second model identified is called the *business life cycle* because this model is related to the stages of the business from inception onward. For example this model offers courses on pre-venture planning, venture

initiation, growth, transition, new product development and intrapreneurship. The final model identified by Hills (1988:117) is called *business functions*. This model provides courses that focus on management-related issues such as team building and innovation management and also on areas such as finance, tax, law, and marketing.

These courses can be taken under an entrepreneurial program or as a supplement to education in a non-business related faculty. For example, Pestolesi (1987:68) provides a list of courses that are suggestions to supplement a regular physical education professional preparation curriculum. Included in this list are courses such as *Small Business Management, Business Accounting, Sports Promotion and Public Relations, Computer Applications to Business, Principles of Entrepreneurship, Commercial Law, Human Relations in Business, Marketing Strategies* and *How to obtain Financial Backing*. The need for entrepreneurship education in non-business related faculties is also iterated by Eekles (1987:266).

In reference to the faculty of engineering, Eekles asserts,

“Entrepreneurship is best learnt [sic] by doing. There exist many opportunities of having students perform small tasks in industry, preferably in smaller companies. Through these many students will develop a taste for entrepreneurship that would not have been generated by mere lecturing” (Ibid).

Vawdrey (1987:30) echoes this need for experiential learning.

“Interaction with business owners is an important element of business education both for the in-school student programs and for adult training. Besides providing information about the realities of owning and working in a business, these individuals serve as role models for future business owners” (Ibid).

Programs must be designed to nurture an entrepreneurial environment if an entrepreneurial curriculum is to be applied. The **London School of Business** uses a multi-disciplinary approach to facilitate an entrepreneurial environment. This approach has been effective in fueling their entrepreneurial curriculum. More than 60% of eligible students take one or more of the five entrepreneurship courses currently offered and over

600 places are filled each year (Appendix 4). **McGill University** also adopted a multi-disciplinary approach to create the entrepreneurial environment needed for incorporating an entrepreneurial curriculum. The Faculty of Engineering offers a Minor in Technological Entrepreneurship (MTE) in order to introduce undergraduate students in the Faculty of Engineering to the concept of technological entrepreneurship and to help stimulate the interest of students in pursuing entrepreneurial careers. The Faculty of Agricultural and Environmental Sciences Programs at McGill offers a Minor in Entrepreneurship and an Entrepreneurship Certificate. Similarly, the **University of Southern California** offers three entrepreneurship courses to non-entrepreneur and non-business majors. The remainder of their entrepreneurship courses are designed to fit two entrepreneurship programs, an undergraduate majors and a graduate program.

Another method to introduce an entrepreneurial curriculum is for an institution to have mandatory courses and entrepreneurial requirements. For example, during the two introductory and general undergraduate years at **Vaxjo University**, a course in venture creation is compulsory. In the graduate course on venture creation at Vaxjo University, the students, in groups of three, help “real” new-starters with issues which appear important to the latter (e.g., preparing a business or marketing plan, providing cost analysis or support in the development of the product). Mandatory requirements are also present at the University of Washington where they offer two programs, the undergraduate *Certificate in Entrepreneurship* and the *Masters in Entrepreneurship* for MBAs and other graduate students. Students at the **University of Washington** must take the five Program in Entrepreneurship and Innovation (PEI) core courses, participate in the PEI club, attend the *High-Tech Entrepreneurship Speaker Series* and enter the *Business Plan Competition*. Graduate students follow the same requirements and they also must have completed a *PEI Consulting Network Project* during their first year in the program. Project teams for the *PEI Consulting Network Project* consist of two to four 1st year MBA students, one 2nd year MBA student as a mentor, and a professional consultant advisor. As well, the project requires the team to assist businesses over a one year term in such areas as marketing, finance, operations, information technology and business plan development.

The **University of Victoria** has also developed mandatory requirements in its four-year co-op program. The first two years are similar to most commerce degrees delivering a co-op program, requiring students to take general business courses. In the third and fourth years, the program focuses on entrepreneurship and practical application through developing an entrepreneurship portfolio and acquiring co-op work experience.

There are other methods to foster an entrepreneurial environment. The **London School of Business** facilitates an entrepreneurial environment by offering a summer school in entrepreneurship. This summer school is designed to address all areas of entrepreneurship through a “learning by doing” approach. The course is held over a nine week period and includes the full gamut of starting a venture, from testing and evaluating propositions to developing and operationalizing a sound business plan, including the acquisition of investors. A series of weekly workshops are held throughout the course and support is offered through the professors and the Foundation for Entrepreneurial Management. Another example of innovative programming designed to foster an entrepreneurial environment is **Babson College**. The curriculum at Babson College is designed with the help of business leaders throughout the country. A further example is found at **Stirling University** where they merged the Entrepreneurship Department with the Department of Management and Organization in August 2000. Experiential learning is emphasized in many prestigious Entrepreneurship Programs. The Entrepreneurship Program at Canada’s **University of Victoria** emphasizes the need for experience in the key elements of the program. The first element of the program requires a sixteen-month experience starting with a core semester of five courses taught as one, followed by an eight-month practicum and then either a specialty academic term or international exchange. The second element of the program requires experiential learning that results in production of an individualized personal entrepreneurship portfolio. Thirdly, emphasis is placed on cognitive development rather than on marks, and the program is designed to reflect that. The final key element outlined states that “we [the University of Victoria] provide a “life-long learning” expertise enhancement system (expert scripting)” (McMullan and Gillin, 1998:21-22).

The **University of Calgary** also echoes this emphasis on experiential learning.

“It was the experiential project work by students for community businesses which was the cornerstone of the whole operation. MBA’s believed that they learned more from live projects provided by local businesses than from more traditional written cases” (McMullan and Gillin, 1998:6).

This focus was key in the development of the Enterprise Development MBA at the University of Calgary.

“The first proposal (1986) for an Entrepreneurship MBA was declined because it was considered too radical. A team of faculty members was needed to set the stage for an Entrepreneurship Program and develop the curriculum. This was done by developing a vision for the program, demonstrating that entrepreneurship was a credible program option, developing political support within the university to ensure the program would be properly financed and staffed, and providing commitment to see the program properly implemented, revised and reimplemented (if required)” (McMullan and Gillin, 1998:23-24).

The core team believed that the program needed to be integrated through team teaching and based on experiential learning.

Similarly, experiential learning is also a focus in the program called the Master’s of Enterprise Innovation at the Swinburne University of Technology in Australia.

Interestingly, this program operates within the Faculty of Engineering. The faculty profile of this model is also of particular interest as it incorporates experiential learning through an experiential teaching model. There are five full-time tenured professors with

“qualifications in marketing, finance, manufacturing, organizational behaviour and strategy. While one is strictly academic, four have experience in business creation (academic practitioners). Teaching resources are also drawn from successful practitioners in the field with acceptable academic credentials (practitioner academics) and successful practitioners with only one degree” (McMullan and Gillin, 1998:23-25).

Another key issue that an institution wishing to implement entrepreneurial studies has to face is where to place them. There are two common places for courses in entrepreneurship to get their start. One is in the continuing education department or in community planning and the other is through a semi-autonomous Entrepreneurship Centre that can develop curriculum independently (Clayton, 1989:12). However, more often than not, entrepreneurship courses are taught mostly in the Faculty of Business. Fifty-two of the seventy-seven Canadian universities have undergraduate courses in entrepreneurship offered by their Faculty of Business. Sixteen of the universities offer undergraduate entrepreneurship education within the Faculty of Engineering (Menziez and Gasse, 1999:5).

There is debate as to whether or not entrepreneurship education should be housed under the business faculty.

“Business academics have become confident in the general usefulness of the business school model. Any new entrepreneurship program offered within a business school will usually have to fight against well-entrenched traditions, vested interests and established canons of required knowledge. In some cases, even entrepreneurship educators who have spent their careers operating within a traditional business school, may resist new models of education. In consequence, it may be a fact of life that it is more efficient to develop entrepreneurship programs outside business schools than within them” (McMullan and Gillin, 1998:23).

Barriers erected against entrepreneurship education are not isolated to one faculty but rather they are embedded in the university structure. When discussing curriculum with colleagues,

“many presidents it seems, have given up any hope of changing the academic program, both because of other demands on their time and attention because of its resistance to alteration. Yet the academic programs of colleges and universities do change – in response to disciplinary and social pressures, in reply to changing faculty interests, in reaction sometimes to varying student interests and needs. What they do not tend to do is change any coherent fashion that reflects the mission of the institution that houses them” (Wood, 1990:51).

Gibb (1987:17) points out that whether an institution can incorporate entrepreneurship in their curriculum depends on their current focus of learning. An entrepreneurial curriculum requires a focus on:

- the future instead of the past
- creativity instead of critical analysis, insight instead of knowledge
- active understanding instead of passive understanding
- emotional involvement instead of absolute detachment
- manipulation of events instead of manipulation of symbols
- personal communication and influence instead of written communication and neutrality
- the problem or opportunity instead of the concept

D. Faculty

In order to incorporate such a curriculum, faculty must support it. Individual faculty members must be shown the benefits of entrepreneurship before their enthusiasm can be aroused (Bennett, 1983:52). Louis (1989:127) points out that this is not an easy task, “most academic groups do not develop norms that encourage multiple forms of entrepreneurship” (Ibid). Weaver (1993:90) claims that, in order to bridge the gap between academic based organizations and entrepreneurs, there needs to be an awareness of hindrances such as the cost of being wrong, the need for justification, and a vested reputation. This awareness must be accompanied by a shift towards a willingness to take risks and combined with skills in problem solving, communication and teamwork in order to successfully link the academic and business sectors. The faculty profiles that

facilitate an entrepreneurial environment must be developed in conjunction with the aforementioned theme of combining experiential and practical learning. The faculty at **Cranfield University** involved in instructing the *Enterprise Integration* option consists of ten faculty with various levels of academic and professional accreditation. **Babson** has a total entrepreneurship faculty of 30 educators who combine scholarship and market accomplishments in their teaching. At **Swinburne University of Technology**, the core academic (tenured) faculty is equivalent to five full-time professors, with qualifications in marketing, finance, manufacturing, organizational behaviour and strategy. One is strictly academic, four have experience in business creation (academic practitioners). Teaching resources are also drawn from successful practitioners in the field with acceptable academic credentials (practitioner academics) and successful practitioners with only one degree.

The **University of Calgary** has many professors who have credentials extending beyond the academic and professional realms. This combination of academic and real world experience has an immediate impact in the class, where current business experiences and innovations become immediately available to students. Extensive use of guest lecturers provides further grounding in current business practices. The faculty at the **University of Durham** also offer a balance between academic strength and commercial experience and capability. At the **University of Southern California**, there are eight faculty members, two are academics and six have solid academic credentials coupled with extensive experience as entrepreneurs. The **Wharton School of Business** has a faculty of over 20 professors and practitioners teaching courses for undergraduate and graduate students. They also guide initiatives for a range of entrepreneurs, from high school students to senior executives. Of the twenty faculty members, four are tenured standing professors and the remainder hold various levels of both academic and professional accreditation. At the **University of Washington**, the faculty of PEI, charged with delivering the entrepreneurship programs, consists of 23 individuals. Of these, twelve are instructors with academic credentials and eleven are PhD's, five of these having experience in the private sector and one with extensive personal experience in venture creation.

Faculty resistance has been noted as a major barrier to incorporating Entrepreneurship Education into the university environment. There are a number of methods that may assist in overcoming this resistance. The Atlantic Colleges Committee for Entrepreneurial Development (ACCED) has designed a model (Appendix 15) for a professional development workshop which allows instructors to understand what an entrepreneurial learning environment is and how it can be created in the classroom. The workshop design is grounded in teaching methodology. It includes traditional teaching, an opportunity for introspection, learning from learner's (student panel), learning from practitioners (*Dining with Dynamo's* - students who have become successful entrepreneurs), sharing of best practices in entrepreneurial teaching methods, discussion of possible resistance from students and open discussion of the prospect of creating an entrepreneurial learning environment. The workshop, which is available in both French and English, has been deemed a success within the college environment and, with some modifications, may offer the potential for success in the university environment.

Dunn (1990) also offers a model to aid in overcoming faculty resistance. His model involves incorporating faculty into the decision making process that emerges when entrepreneurship is incorporated in the university structure.

“A good committee, with direct or indirect leadership from the president of the university, can build consensus around the areas to be emphasized in the future. It can complement the president's actions in building his or her own team, raising standards for tenure, seeking a few key faculty appointments, using the budget process to channel resources, and raising funds for programs of special interest” (Dunn, 1990: 27).

It will also minimize opposition and conflict by making people within the institution feel included in the changes and decision making process (Ibid). Weaver (1993) expands on this model as he adds the component of the university-based centres for entrepreneurship.

E. Centres for Entrepreneurship

Weaver (1993:91) argues that university-based centres must work to bridge gaps and misconceptions between academics and entrepreneurs by establishing program criteria such as:

- helping students develop creative interdisciplinary thinking and problem solving abilities
- encouraging “non-traditional” instructional activities and cooperation with faculty colleagues
- enhancing opportunities for internships, consulting abilities, and alternative learning experiences for students
- helping develop courses in entrepreneurship, creativity, innovation, and related fields.

Once academics and entrepreneurs are united and the entrepreneurship curriculum is incorporated, there are benchmarks to measure entrepreneurship in the realm of academia. Vesper (1988:3) identifies the following benchmarks: research publications and areas of interest; course offerings; course enrolment and prizes available for the field. The degree of entrepreneurial progress in this realm is directly related to the extent that an entrepreneurship focus permeates the identified benchmarks.

There are varying degrees of involvement that these centres can have in regards to creating an environment that will facilitate an entrepreneurial curriculum. An example of a centre that is highly involved in the creation of such an environment is the Centre for Entrepreneurship at **Stirling University**. This centre delivers the university’s entire entrepreneurship program. This is also the situation with the Australian Centre for Entrepreneurship and Innovation (ACEI) at **Swinburne University**. ACEI faculty supervise Ph.D. candidates, create case studies, teaching materials and curricula to enhance the Entrepreneurship Education programs, and teaches courses in the practice of entrepreneurship research. The courses at the **University of Southern California** are also delivered through the entrepreneurship centre known as the Lloyd Greif Centre for Entrepreneurial Studies.

The Dobson Centre for Entrepreneurial Studies, at **McGill University**, is another example of a centre that is highly involved in facilitating an entrepreneurial environment. The mission of the centre is to teach, promote and encourage successful entrepreneurial activities at McGill University and in the business community. The Dobson Centre for Entrepreneurial Studies also awards four \$500 scholarships that promote entrepreneurship. There are other centres that offer financial support/incentives to students. The Program in Entrepreneurship and Innovation (PEI) is the **University of Washington's** centre for entrepreneurship education, research, innovation, and outreach. The centre is the delivery agent for the PEI programs and also coordinates the other activities in which PEI students are expected to be involved. The most notable may be the UW Business Plan Competition, which offers a grand prize of \$35,000 US.

A final example of a centre that is highly involved with creating an entrepreneurial environment is the International Consortium for Venture Expertise. This centre has been instrumental in developing the entrepreneurship curriculum in conjunction with the **University of Victoria – *The Venture Ready Model***. It offers support to students and it also develops new curricula for mid-career individuals and high school educators with programs targeted to fit their needs. As well, it offers an annual workshop for Entrepreneurship Educators.

An example of a centre that is fostering an entrepreneurial environment to a moderate degree is the Centre for Family Business Management and Entrepreneurship at the **University of Calgary**. This centre sponsors a number of activities such as:

- Guest speaker series
- Development and delivery of educational programs
- Course-based educational advancements
- Student projects, Case writing grants
- Conduct, promote and support basic applied research
- Provide a resource information service
- Joint initiatives with University of Alberta and partners in family business development.

Another example of such a centre is the INSEAD Centre for Entrepreneurship which, in conjunction with the Entrepreneurship faculty at **INSEAD** and the **London School of Business**, created the *Annual European Business Plan of the Year Competition*. The objective is to encourage the teaching of entrepreneurship at business schools throughout Europe and to stimulate the creation of new business ventures. It has brought together teams of students from leading European business schools and universities to present and defend a business idea and plan to a team of judges, most of whom have come from the sponsoring companies.

The Arthur M. Blank Entrepreneurial Centre at **Babson College** is an example of a centre that facilitates an entrepreneurial environment on a lower degree. It provides research and office space for faculty, Babson students, and visiting scholars; archival space for entrepreneurial research materials; exhibit space featuring entrepreneurial people, events, and accomplishments; and a 40-seat room for distance learning.

F. Other Vehicles for Facilitating Entrepreneurship

The presence of an entrepreneurial network on campus is one method to facilitate an entrepreneurial environment. For example, the Entrepreneurial Club at **Wharton School of Business** enhances the entrepreneurial experience at the school by establishing both internal and external networks which are strongly supported by the school and the community. The E-club has become the university's premier networked resource to promote entrepreneurial activity among students, alumni and researchers who are starting, working for, or advising new businesses in high growth environments.

McGill University facilitates an entrepreneurial environment by offering scholarships that promote entrepreneurship. The Schulich Award for Entrepreneurship offers a prize of \$1,000 to a student entering the first year of the MBA Program at McGill University in the Faculty of Management. They also offer The Canadian Advanced Technology Alliance (CATA) scholarship of \$5000 to encourage student entrepreneurship,

leadership, innovation, and research. The prize is awarded to a student of the School of Computer Science. Scholarships are awarded for excellence in research work done by graduate students in the disciplines of: Aerospace; Computing Science/Software Engineering; Electronics/Advanced Manufacturing; High-Tech Marketing or Telecommunications.

Some Japanese schools, not included with the model programs, offer incentives for venture creation. These schools provide investment funds jointly with venture-capital firms. Hokkaido University, the first institution to do so, established its "Hokudai Ambitious Fund" in January of this year. With help from a number of venture-capital and securities firms, this fund has already invested around 500 million yen (\$4.3million Cdn). The investment targets new and established venture firms started and managed by university researchers and students as well as alumni. In the Hokkaido set-up, the university identifies operations with a chance at doing well as businesses and the venture-capital firms evaluate their feasibility before deciding whether to invest (<http://jin.jcic.or.jp/trends98/honbun/ntj970708.html>).

The University of Tsukuba and the Tama Institute are also planning investment funds aimed at nurturing business ventures. The Tama plan will involve seeking business ideas outside the school; the school will then act as a go-between to funnel investment to the start-ups. Trading firms and other private companies involved with the program will support the new operations after the school selects the most promising ideas and helps draw up business outlines for the investment recipients (<http://jin.jcic.or.jp/trends98/honbun/ntj970708.html>).

G. Bureaucracy

The bureaucracy of many universities can be a barrier to incorporating an entrepreneurship curriculum.

“If the old response to an idea was to ask the presenter to flesh it out and present it in the annual budget process, the response now was to wonder why the presenter was wasting time on approvals rather than taking it straight to a foundation or agency” (Dunn, 1990:30).

Red tape and the usual bureaucratic processes must be reduced in order to foster an entrepreneurial environment, which means that administration must learn to trust and empower the faculty for this to work. However, this prospect seems unlikely because it challenges the hierarchy under which the university structure operates. A dean is not going to allow faculty to have no accountability nor will he/she remove him/herself from the process (Dunn, 1990:30).

Wholihan (1989:194) expands on this problem as he claims that entrepreneurial leadership is rare on campus because deanships may limit the mind and spirit.

“Faculty members who are either active as entrepreneurs or who have entrepreneurial leadership qualities are not interested in a deanship when it is thought of as a bureaucratic, administrative position. Even if such a dean should emerge, it is not likely that there will be support from the top administration” (Ibid).

This mentality is challenged by Louis (1989:120) as he argues “that university administrative support has little effect on entrepreneurship.”

Despite Louis’ (1989) argument, there are several actions Wholihan (1989:196-197) identified at the dean’s level of responsibility that can be taken to promote and encourage entrepreneurship within a university. These actions are to clearly communicate

commitment by using positive language and putting it in writing. Secondly, ideas must be drawn from people through information sharing sessions. Thirdly, publicize success stories early because success breeds success. Fourthly, combat red tape so the way for entrepreneurial activity is clear and, finally, offer rewards to those who initiate entrepreneurial activity.

IV. COMMENTS ON MODELS AND PROGRAM DEVELOPMENT

The models of entrepreneurship programs noted are considered to be the top university programs in this field by experts in entrepreneurship, Vesper, Gartner, Menzies and Gasse. Each program has been designed to suit the particular university in which it is delivered. While incorporating an entire program may be effective in some cases, this may not be the case in all circumstances. An entire program may not be transferable in whole to universities operating in different economic or cultural environments, catering to different student and faculty needs. As indicated in the literature review for this project, current research suggests that the degree to which the university examines external and internal influences directly affects the degree of successful incorporation that an Entrepreneurship Program will achieve.

Vesper and Gartner (1997:405-407) assert that it is equally important to evaluate the level of entrepreneurship programs used to respond to the entrepreneurial requirement. They offer benchmarks for evaluation of programs using four major criteria: (1) qualifications of faculty, (2) the variety and depth of the entrepreneurship curriculum, (3) academic standards and student scores, and (4) the quality and depth of resources. In attempting to select a model that fits the entrepreneurial requirement at a specific university, should it be deemed unreasonable or unrealistic to incorporate an entire program, these criteria may be equally effective in evaluating and selecting the optimum components for a unique entrepreneurship program. This does not suggest that successes cannot be replicated. Liston and Swanson (2001:25), in their study of replicating innovative programs in the US Community College System, found that “replication is an efficient way for small colleges to create effective programs for their area.” They also assert that adapting a program to address the needs in another setting can be just as effective.

The majority of programs included in the study are graduate programs, and most were developed to suit the needs of a specific university. This suggests that adapting pieces of

a number of programs may be the best method for implementing an effective entrepreneurship program in Atlantic Canadian universities. As well, it may be that each university will create their own model by selecting the “best practices” that fit their needs and meet their objectives. The alternative would be to create a generic model that meets the basic requirements of all Atlantic Canadian universities, but may not address the specific needs of each. The preference of the research team is the former, creating models from the best practices that address the specific requirements and unique environment of each school.

In order to assist model development, the following table summarizes the best practices, offering the information in a step by step format, intended to address specific needs. According to Lois Stephenson (1996:22), a program of entrepreneurship development requires five main steps:

- Awareness and promotion of entrepreneurship
- Entrepreneurship orientation and education (enhance learning)
- Enhance support services (including access to business counseling and training)
- Build networks
- Support research and dissemination of information about entrepreneurship.

While these steps for implementation were directed mainly at developing entrepreneurship, they are, for the most part, transferable to developing a model for entrepreneurship education. The following table employs these steps, minimally modified, to summarize the best practices in a logical sequence and for applicable circumstances. This is not intended to be a model for implementation, rather a guide to assist in selecting pieces that allow for realistic and unique model creation depending on the needs of each university.

TABLE 1: EXAMPLES OF SELECTIONS FOR MODEL DEVELOPMENT

Need to be met	Practice that meets the need
<p>Awareness and Promotion</p>	<p>Identifying a Champion for Entrepreneurship Education</p> <ul style="list-style-type: none"> ➤ According to Theresa Menzies, it is crucial to the Development of an effective program to have a Champion for the program within the faculty, the higher the level (president, dean) the more effective the champion. The Champion can offer leadership in developing acceptance and support for entrepreneurship programs <p>Create a vision and/or mission statement for the program in order to create awareness of its goals and objectives.</p> <p>Communicate commitment to the program</p> <p>Develop presentations that address WIFFM – What’s in it for me? - These presentations can address issues relevant to university presidents, administration, professors and students such as:</p> <ul style="list-style-type: none"> ➤ the demand for more entrepreneurial graduates ➤ increased demand by students for this type of programming ➤ attraction of private sector funding ➤ increased enrollments ➤ outcomes of entrepreneurial skill building such as increased motivation and self-efficacy in students, etc.
<p>Entrepreneurial Orientation –lack of interest in and awareness of the benefits of developing entrepreneurship within faculty members</p>	<p>ACCED model for professional development workshops aimed at developing understanding in professors/educators of what an entrepreneurial learning environment is, how it can be created in the classroom, what methods are most applicable for teaching entrepreneurship, and what resistance they may face from students and others. (See Appendix 15)</p> <p>Involve faculty members in the decision making process regarding the incorporation of entrepreneurship in the university culture.</p> <p>Evaluate and reward professors in a manner that supports the development of entrepreneurial skills and thinking.</p>

<p>Entrepreneurial Education – Teaching methods</p>	<p>For basic business skills – traditional methods work (e.g., lectures and case studies)</p>
<p>Program Design with limited faculty resources</p>	<p>For development of entrepreneurial skills and characteristics – experiential learning is recommended</p> <p>Incorporate the use of simulations, cases, speaker series, co-operative/mentorship work placements, guest lecturers, case/business plan competitions</p> <p>Develop the program slowly incorporating one course at a time</p> <p>Develop a cross-faculty course aimed at developing the basic skills and characteristics required and creating awareness of the benefits of entrepreneurship</p> <p>Seek private sector sponsorship (e.g.; Lloyd Greif Centre, Dobson Foundation) for the development of the program</p>
<p>Program Design with sufficient faculty resources</p>	<p>(All the above are still applicable)</p> <p>Incorporate a full program that fits the university’s goals and environment.</p> <p>Use a mix of academics, academic practitioners and practitioner academics to increase experiential learning, both hands-on (doing) and vicarious (sharing experiences).</p> <p>Create mandatory components/courses that are foundational courses for the entrepreneurship program.</p> <p>Offer summer schools for students and others interested.</p>
<p>Where to place the program</p>	<p>Entrepreneurship programs can be created to work across disciplines with a general course aimed at assisting all students develop entrepreneurial skills and develop an understanding and appreciation of the possibilities available to them in applying their education</p> <p>Many of the models selected the Faculty of Business to deliver the program, while others selected Engineering or another discipline. The key factor in placement is the interest, knowledge, support and commitment of the faculty for incorporating the program</p>

Entrepreneurship Activities	Student run clubs, competitions, simulations, hands-on business counseling/planning (see Wharton School of Business and the University of Washington)
Enhance support services	<p>Develop Centres of Entrepreneurship</p> <ul style="list-style-type: none"> ➤ According to Theresa Menzies, a centre for entrepreneurship available to students, faculty and community members is key to the development of a strong entrepreneurship program. <p>Centres can be community based – local business people and entrepreneurs, business counselors and successful entrepreneurs offer their services and expertise to students of entrepreneurship (see -University of Calgary – Family Business Centre)</p> <p>Centres can be privately sponsored and offer a full range of activities for students (see – The Lloyd Greif Centre at USC, Dobson Centre at McGill, Barclay’s Centre at Durham, FEM at the London School of Business)</p> <p>Centres can offer basic information services, counseling services, or even develop and deliver the full program</p> <p>Solicit private sector sponsorship for scholarships, bursaries, prizes for competitions, seed capital for venture creation, summer/co-op employment placements, simulation programming, etc.</p>
Build Networks	<p>Enhance service offered by Centres for Entrepreneurship to include business counseling and planning for local business and entrepreneurs done by students with support of professors (See University of Calgary).</p> <p>Partner with universities, both local and those with established entrepreneurship programs to share best practices, information and resources (See University of Victoria)</p> <p>Partner with from private sector companies – mentoring, sponsorship of activities and competitions (see INSEAD, Wharton School of Business, University of Southern California Entrepreneurship Venture Management Association)</p> <p>Develop links with local business associations such as the Chamber of Commerce, the Board of Trade, and venture capitalists to support student create ventures</p>

Build Networks cont'd:	Create venture incubator labs within Centres for Entrepreneurship, or within the University Environment (see University of Calgary, University of Victoria, Wharton School of Business, INSEAD, Swinburne)
Support Research and Information Dissemination in Entrepreneurship	<p>Incorporate research into Centres of Entrepreneurship (see Babson College, University of Calgary, University of Washington).</p> <p>Develop or form networks with universities offering majors, honours and graduate programs designed to encourage research into entrepreneurship.</p> <p>Attend or host conferences/workshops related to Entrepreneurship and the study of Entrepreneurship.</p>

This table is not all inclusive, nor is it intended to be the format for developing the model for Entrepreneurship Education to be employed in Atlantic Canadian universities. It is meant to be used as a guide, to facilitate the process of model development. The key to successful model development is to ensure that the model selected fits the culture, the goals and objectives, the needs and the resources of each university. After undertaking a thorough needs assessment, the main areas to be addressed for program development are:

- identifying a champion or champions for the program
- developing a vision and mission statement for the program
- developing and communicating commitment to the program
- creating awareness and acceptance for the program
- facilitating faculty orientation/education in entrepreneurship
- ensuring a realistic and holistic design of the program utilizing the most effective teaching methods possible within available faculty resources
- developing supporting activities
- creating or fully utilizing available Centres for Entrepreneurship (e.g.;UBDC's)
- developing networks with other universities, community partners, private enterprise and funding agencies

Appendices describe the programs and their supporting components in some detail to enable a wide understanding of what types of initiatives work. This can allow for selection of initiatives that fit with the vision held for the development of Entrepreneurship Education within the Atlantic Canadian universities. Appendix 16 offers details of the Entrepreneurial Skills Program developed by CEED for the University College of Cape Breton and Dalhousie University. This program is based on the program at Swinburne University in Australia. Reviewing this program's implementation, and assessing the development of the pilot program currently being implemented at Memorial University in Newfoundland, may be of help in establishing the groundwork for developing an effective model without "reinventing the wheel".

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APPENDICES

APPENDIX 1: BABSON COLLEGE

Boston, Massachusetts, United States

Mission/Objectives:

An objective of Babson is that you will have all the skills and a good bit of the experience you need to begin your business career when you graduate.

Teaching Method:

Babson requires students to combine the study business through classroom lectures with a practical education as well. During a student's first year, they will join a student team and will create, run, and liquidate a business, with a \$3,000 start up loan from Babson.

Design:

Our curriculum, designed with the help of business leaders throughout the country, is the road map for your career. It can take you anywhere you want to go. The Foundation, Intermediate, and Advanced levels of the curriculum challenge you to master one set of skills and knowledge before moving on to more complex, advanced work.

Entrepreneurship education is offered at both the undergraduate and the graduate levels.

Undergraduate Level

In the Foundation semesters, you'll take an equal number of business and liberal arts courses. These 11 Foundation courses provide the basic skills and knowledge on which you'll build the rest of your Babson education.

The Intermediate Management Core (IMC) is the nucleus of business education. This three-semester course which typically starts in your sophomore year, is taught by a "team" of professors, experts in their respective fields, and relates the interaction of each facet of business with the others.

Once you complete the Intermediate Level, you'll begin to chart your own course of study. With the help of your faculty mentor, you will design your "Learning Plan." You and your faculty mentor will explore options of which coursework, internships, and external experience will best prepare you to meet your immediate career goals upon graduation

During these last two semesters, you customize, expand, and fine-tune your business education. Your individual "Learning Plan" includes 12 courses chosen from the Advanced Management and Liberal Arts electives and at least one field-based experience, such as an internship.

Graduate Level

Curriculum: Entrepreneurship and the e-Business Plan

This is a specialized section of the regular entrepreneurship course offered in fall 2000. Team taught by Associate Professor Stephen Spinelli and Mike Werner of Microsoft.com Lab., 70% of the content and cases focus on e-commerce.

Entrepreneurship and the Technology Business Plan

In this second new and specialized section of the entrepreneurship course, 50% of the content focuses on e-commerce and 50% on other technology topics. Professor William Bygrave will teach the course in spring 2001.

Intensive Electives

Faculty are developing two to three entrepreneurship courses as electives for the F. W. Olin Graduate School of Business at Babson. The elective courses will be offered in the intensive, three-day format and likely topics include:

- Strategic Entrepreneurial Alliances
- Immersion in Creativity
- Venture Capital Sector

Faculty Profile:

Babson has a total entrepreneurship faculty of 30 educators who combine scholar and market accomplishments in their teaching. They have a tenured and tenure-track staff of 12 full-time academics with doctoral degrees from internationally acclaimed institutions. Many have also founded businesses as diverse as high technology and national retail enterprises. Adding exceptional practical experience to the academic mix, they have 12 adjunct, or entrepreneur, faculty members have founded firms that grew as large as billions of dollars in value. Academic and Practitioner faculty members are paired for team teaching, curriculum development, and research, the result is innovative, integrated entrepreneurship education.

Centre for Entrepreneurship:

The Arthur M. Blank Entrepreneurial Centre provides research and office space for faculty, Babson students, and visiting scholars; archival space for entrepreneurial research materials; exhibit space featuring entrepreneurial people, events, and accomplishments; and a 40-seat room for distance learning.

APPENDIX 2: CRANFIELD UNIVERSITY

School of Industrial and Manufacturing Science, Bedford, England

Mission/Objectives:

To be a leading European centre for integrated manufacturing business research, consultancy and postgraduate teaching. To equip individuals with the perspectives, methodologies and competencies to apply the technologies of integration for business benefit.

Teaching Methods:

The program is taught using traditional methods augmented by hands-on project work. Delivery of information is done by both academics and accredited professionals.

Design:

The Masters in Enterprise Integration is usually taken full-time over one year, starting in October each year and consisting of three parts which are weighted for assessment purposes as follows:

Lecture Program 40%
Group Project 20%
Individual Project 40%

Modules:

Enterprise Integration 1 & 2 - The capstone modules:

Defines the context and methodology of integration in manufacturing and related business enterprises and examines integration strategy formulation.

Knowledge Management and Innovation 1 & 2:

Introduction to the concept of Knowledge Work embodying Knowledge Management and Knowledge Development.

Analyzing the Business Environment:

The business value model and key analytical tools.

Product Data Management:

Engineering and product definition issues.

Concurrent Engineering:

Fast product co-development.

Manufacturing Management:

Production management issues and trends.

General Management:

Introduction to key management skills.

Enterprise Computing:

Key concepts and techniques in the use of ERP application and software tools.

Faculty Profile:

The faculty involved in instructing the Enterprise Integration option consists of ten faculties with various levels of academic and professional accreditation.

Centre for Entrepreneurship:

The centre available to students, Enterprise Integration, is more of an academic centre. Enterprise Integration is an integrated postgraduate education, research, consultancy operation. The personnel (eighty individuals) are housed in facilities at the entrance to the Cranfield University campus. Enterprise Integration holds the coveted American Society of Manufacturing Engineers International LEAD Award, for Leadership and Excellence in Academic Development in Computer Integrated Manufacture. Cranfield was the first university in Europe to hold this award.

(<http://www.cranfield.ac.uk/>)

APPENDIX 3: INSEAD

European Campus in France & Asian Campus in Singapore

INSEAD and Ernst & Young have joined forces to offer a practice-based program specifically for owner-directors called The Owner – Directors’ Program.

Mission/Objectives:

“Educate the world's business leaders by achieving intellectual influence and translating it into relevant learning for all business communities in the world. Accelerate innovation by constant renewal of teaching activities and constant testing of new teaching methods. Build intellectual capital by emphasizing investment in faculty and research to expand the frontiers of knowledge and understanding.”

The program targets owner-directors or policy-level managers in entrepreneurial companies who are committed to growing their businesses.

The program has five objectives:

- Extending your ability to build and manage a growing organization,
- Helping you to effectively manage rapidly changing product-markets,
- Aiding you in capturing opportunities in increasingly international markets,
- Developing your ability to integrate and manage human, technical, marketing and financial resources,
- Improving your leadership skills.

Teaching Methods:

INSEAD has committed itself to a multidisciplinary and international approach to the study of the family business. What makes INSEAD unique is that it combines a profound knowledge of business with a deep awareness of cross-national differences in the environments in which businesses operate. INSEAD draws students, faculty and visiting scholars from around the world to a learning environment with no dominant nationality. INSEAD's outlook on entrepreneurship is therefore not overly influenced by any one approach.

Design:

The program is delivered in the form of two modules. A new elective course on family firms has been developed and optional classes on family firms have also been offered in some executive programs.

Module 1

- Marketing with an entrepreneurial spirit
- Price negotiations: concepts and tactics
- Stages of growth
- Competition and business strategies
- Managing and capturing value
- Challenges of growth and raising debt
- Financial accounting
- Global marketing with limited resources
- Understanding and managing cash
- Boards of directors
- Cash and growth
- The strategic decision – making process in growing a company
- The entrepreneurial management of people
- Breakthrough services
- Strategic platform
- Managing under adversity
- High performance teams

Module 2

- The challenge of leadership: a personal odyssey
- Financial investment criteria: NPV and others
- Building competitive advantage through outstanding customer value
- Managing partnerships and strategic alliances
- Distress management
- Customer service and key account management
- Managing rapid growth
- Future trends in marketing
- Building and maintaining entrepreneurship
- Family Firms
- Equity valuation
- Whither the global economy: correction or crash?
- Evolving role of the owner – manager

Faculty Profile:

INSEAD currently has six core academic (tenured) faculty in the area of entrepreneurship and family business, as well as two affiliate faculty members and four visiting faculty. In the past five years, INSEAD faculty members have written some 30 case studies and published over 20 articles. Active collaboration with the European Venture Capital Association (EVCA) and other venture capital organizations has involved INSEAD faculty members fostering and training venture capitalists with a view to encouraging increased levels of entrepreneurship.

Centre for Entrepreneurship:

The mission of the 3i Venturelab is to support the development of new insights, understanding and awareness of entrepreneurship and related phenomena. Research undertaken by this new academic centre investigates ways in which the basic skills, attitudes and behaviour to support entrepreneurial skills may be understood and cultivated. The centre seeks to become the principal source of information on European independent businesses and will produce and distribute regular pan-European research output on subjects related to entrepreneurship.

European Business Plan Competition:

The European Business Plan of the Year Competition was jointly conceived and created by Entrepreneurship faculty at INSEAD and London Business School and held for the first time in 1993. The objective was to encourage the teaching of entrepreneurship at business schools throughout Europe and stimulate the creation of new business ventures. It has brought together, on an annual basis, teams of students from leading European business schools and universities to present and defend a business idea and plan to a team of judges, most of whom have come from the sponsoring companies. INSEAD won the competition in 1993, 1995, 1997, 2000. Participating schools in 2000 were:

Cranfield School of Management
IESE Barcelona
International Management Centre, Budapest
Rotterdam School of Management
Stockholm School of Economics

Helsinki University of Technology
INSEAD
London Business School
SDA Bocconi
The Management School, Imperial
WHU Koblenz Graduate School of
College Management

(<http://www.insead.edu/>)

APPENDIX 4: THE LONDON SCHOOL OF BUSINESS

London, England

Entrepreneurship was established as a separate subject area in 2000.

Mission/Objectives:

Our aim is to become the recognized European Centre of excellence for Teaching, Research and Practice of Entrepreneurial Management and a leading International Entrepreneurship Centre.

Teaching Methods:

The MBA is comprised of course work, lectures, guest speakers and practical/experiential learning. The practical/experiential work includes mentoring, case work and projects. One major component of the course is the Second year Project, an actual consulting type project that spans the full year. The project is developed by the students and a contract is entered into with the clients. The student teams negotiate a fee with the clients, fees generally ranging between 1,000 and 8,000 pounds sterling.

Design:

More than 60% of eligible students take one or more of the 5 entrepreneurship courses currently offered with over 600 places filled each year.

MBA Program in Entrepreneurship:

There are four streams of learning on the MBA Program offered at LBS: becoming an independent thinker; making things happen; becoming a leader and becoming an international citizen. These four streams provide points of reference as students develop their personal human capital.

The first year develops core knowledge and skills in a team environment. (60-70 students with a study group of 6-7 during the core courses). There are a total of 15 core courses and 5 electives.

The Core Courses:

Term 1

Understanding General Management (UGM)
Understanding Financial Analysis
Operations Management
Developing Effective Organizations
Corporate Finance
Information Management

Term 2

Corporate Finance
Decisions and Risk Analysis

Marketing Strategy, Decision Making & Implementation
 Developing Effective Organizations
 Ethics & Professional Standards
 Shadowing (Practical Exercise)
 Interpersonal Skills (Practical Exercise)

Term 3

Marketing Strategy, Decision Making & Implementation
 Strategic Management
 Management Accounting
 Understanding the International Macro-Economy
 Choice of an Elective
 Languages

Electives available in Entrepreneurship:

Essential Law for Entrepreneurs
 Financing the Entrepreneurial Business
 International Venture Capital
 Managing the Growing Business
 New Technology Ventures
 New Venture Development

The school also offers a summer school in entrepreneurship. This summer school is designed to address all areas of entrepreneurship through a “learning by doing” approach. The course is held over a nine week period and includes the full gamut of starting a venture, from testing and evaluating propositions to developing and operationalizing a sound business plan, including the acquisition of investors. A series of weekly workshops is held throughout the course and support is offered through the professors and the Foundation for Entrepreneurial Management (described below).

Faculty Profile: The faculty is comprised of eight instructors, 2 tenured professors, 2 associate professors, 1 assistant professor, 2 teaching fellows and 1 research fellow.

Highest Degree	Academic	Academic Practitioner	Fellow
PhD	1	2	2
MBA	1	1	1

Centre for Entrepreneurship: Foundation for Entrepreneurial Management (FEM)

Mission Statement:

“For the Foundation for Entrepreneurial Management and London Business School to be the recognized European centre of excellence for research, teaching and practice of entrepreneurial management and a leading international centre for the study of entrepreneurship.”

The FEM at London Business School aims to make a lasting impact on the development of its partners competitive advantage through:

- research and teaching of best practice in entrepreneurial management (the FEM has already developed an unusually large suite of some 50 cases, featuring entrepreneurial companies across Europe)
- provision of support and advice for entrepreneurs and their backers
- carefully targeted direct investment in promising individuals and teams

In order to continue the development of the FEM, a network of Strategic Partners has recently been established which consists of 6 Global companies operating in the following sectors: law, accountancy, banking, consulting and information technology. A. T .Kearney, Ernst & Young, Barclays, Baker & McKenzie, Lehman Brothers and IBM have all recently confirmed their support for the FEM Strategic Partners Network. Another important partner, The Centre for Scientific Enterprise was created as a joint venture between LBS and UCL with a £4.6 million award by the Government from the Science Enterprise Challenge in 1999.

The organization and the activities of the FEM are threefold:-

- Teaching and Materials Development
- Research and Publishing
- Business Practice

Provision of support and advice for entrepreneurs and their backers:

The LBS Entrepreneurs' Club, established in June 1999 is a subscription based members only Club. The Club comprises of individuals with an interest in making private investments in early stage companies and supporting start-ups which have a close association with the School.

Provision of financial support:

Carefully targeted direct investment in promising individuals and teams connected to LBS is provided through the Foundation for Entrepreneurial Management (FEM). FEM has established an incubator unit close to the school at Huntsworth Mews for early stage businesses and Sussex Place Investment Management, an IMRO authorised investment management company which currently has £30m under management. The start-ups that have been supported in the last 12 months include APR Ltd., IGLU.com, and the Global Workplace.

The Alumni Entrepreneurs Network and EClub are also based at London Business School. (<http://www.lbs.ac.uk>)

APPENDIX 5: MCGILL UNIVERSITY

Montreal, Canada

McGill University's Minor in Technological Entrepreneurship (MTE) operates within the Faculty of Engineering. McGill University also offers a Minor in Entrepreneurship and a Certificate in Entrepreneurship that operate within the Faculty of Agricultural and Environmental Sciences Program. It is also important to note that while there is no Minor or Certificate Program, the Faculty of Management does offer entrepreneurship courses.

Mission/Objectives:

Upon completion of the courses in this specialization, students will be able to:

- Identify and state management obstacles specific to entrepreneurial settings.
- Design a strategic plan for an entrepreneurial venture from concept to realization.
- Employ innovative technologies necessary to grow a small business.
- Implement a plan for finding, managing, and growing a work team.
- Analyze potential markets and avenues by which to reach those markets.

Teaching Methods:

Some of the elements explored in the entrepreneurship specialization include a study of the basic principles of technology strategy in entrepreneurial ventures, a review of the strategic and human resource obstacles experienced by entrepreneurs, and an examination of potential markets ripe for entrepreneurial enterprise. The courses offered in this specialization provide students the opportunity to test theories, models, and strategies through case-based study approach. Students are taught in a classroom environment.

Design:

The Faculty of Engineering offers a Minor in Technological Entrepreneurship (MTE) in order to introduce undergraduate students in the Faculty of Engineering to the concept of technological entrepreneurship and to help stimulate the interest of students in pursuing entrepreneurial careers.

The Faculty of Engineering requires students to complete 6 (3-credit) courses for a total of 18 credits. The courses that they choose from are:

- Technological Entrepreneurship
- Leadership, Power, Influence
- Marketing of Technology
- Organizational Strategies for Advanced
- Technology Firms (Prerequisite: 6 credits of MTE courses)
- Managing Human Resources
- Technological Entrepreneurship Project (Prerequisite: 6 credits of MTE courses).

The Faculty of Agricultural and Environmental Sciences Programs at McGill will offer a Minor in Entrepreneurship and an Entrepreneurship Certificate beginning September 2001. Program Courses required for the Entrepreneurship program include:

Principles of Microeconomics
Economics of Marketing
Management Theories and Practices
Accounting and Cost Control
Entrepreneurial Leadership
Agribusiness Management
Venture Capital Opportunities
Personnel Management

Faculty Profile:

No information is available on the faculty profiles involved with teaching the Minor in Entrepreneurship and Certificate in Entrepreneurship from within the Faculty of Agricultural and Environmental Sciences Program or on the Entrepreneurship Minor operating from within the Faculty of Engineering, possibly due to the very recent (September 2001) offering of it.

Centres for Entrepreneurship:

The Dobson Centre for Entrepreneurial Studies, Faculty of Management. The mission of the centre is to teach, promote and encourage successful entrepreneurial activities at McGill University and in the business community. The Dobson Centre for Entrepreneurial Studies also awards scholarships that promote entrepreneurship.

The Ian McLachlin Prize for Entrepreneurship in Engineering awards two prizes of \$500 to encourage Engineering students to undertake courses in Entrepreneurial Studies in the Faculty of Management. The prizes are awarded to Engineering students with high academic standing. They must have completed at least one year of study. They must present a short essay outlining the most innovative concept that has the potential to be commercialized and finally, they must be registered in a course under the auspices of The Dobson Centre for Entrepreneurial Studies. Awarded by the Faculty of Management Scholarships Committee in conjunction with the Faculty of Engineering and The Dobson Centre for Entrepreneurial Studies.

The John D. Thompson Prize for Entrepreneurship in Engineering awards two prizes of \$500 to encourage Engineering students to undertake courses in Entrepreneurial Studies in the Faculty of Management. The prizes are awarded to Engineering students with high academic standing. They must have completed at least one year of study. They must present a short essay outlining the most innovative concept that has the potential to be commercialized and finally, they must be registered in a course under the auspices of The Dobson Centre for Entrepreneurial Studies. Awarded by the Faculty of Management Scholarships Committee in conjunction with the Faculty of Engineering and The Dobson Centre for Entrepreneurial Studies.

Other Scholarships that Promote Entrepreneurship:

The Schulich Award for Entrepreneurship Schulich Award for Entrepreneurship awards a prize of \$1,000 to a student entering the first year of the MBA Program at McGill University in the Faculty of Management.

The Canadian Advanced Technology Alliance (CATA) scholarship of \$5000 is to encourage student entrepreneurship/leadership/innovation/research. The prize is awarded to a student of the School of Computer Science Scholarships for excellence in research work done by graduate students in the disciplines of: Aerospace; Computing Science/Software Engineering; Electronics/Advanced Manufacturing; High-Tech Marketing or Telecommunications.

(<http://www.mcgill.ca>)

APPENDIX 6: STIRLING UNIVERSITY

Stirling, Scotland

Mission/Objectives:

As a University we face the challenge of:

- understanding the role of entrepreneurship in economy and society
- applying that knowledge to further social and economic progress
- promoting entrepreneurship education to equip students to confidently face uncertain labour markets and the entrepreneurial opportunities and challenges of the modern economy
- creating new value both social and commercial from academic activities

Teaching Methods:

No information available on web-site

Design:

The undergraduate degree structure is under review following the merger of the Entrepreneurship Department with the Department of Management and Organization in August 2000. Currently, the first three semesters are common to the study of Management Science. The following courses and programs in entrepreneurship are currently offered but may be modified for next academic year:

- Introducing Entrepreneurship
- Entrepreneurship in Film and Media Studies
- Launching A New Venture
- Growing Your Own Business
- The Entrepreneurship Experience
- Research methods unit for dissertation

Graduate Degrees:

MSc in Entrepreneurial Studies by Distance Learning

This program is intended to develop academic understanding and practical skills in small business, entrepreneurship and enterprise development. It is marketed to:

- Practitioners, officers, advisers engaged in enterprise and small business support and development
- College/university lecturers wishing to specialize in entrepreneurship and enterprise development
- Entrepreneurs/ business owners who wish to acquire new skills and insights into entrepreneurship
- Potential entrepreneurs who may wish to start their own business in the future

Academic Units:

1st Year	Starting your Business
	Marketing
	Financial Management
	Counseling

2nd Year	Entrepreneurship Venture Management Business Strategy
Project Units:	
1st year	Research for Enterprise
2nd Year	Business Strategy Project
Research Unit:	End of 2nd year Dissertation

MBA in Entrepreneurship and Business Venturing

This program is aimed at providing participants with a range of applied skills and abilities, supported by a strong theoretical framework, capable of being used by them in business enterprise of their own, or as a member of an organization which is seeking employees capable of acting in an entrepreneurial way.

Units of Study - Core Units

- Introducing Entrepreneurship
- Launching A New Venture
- Growing Your Own Business
- Experiencing Entrepreneurship
- Creativity and Entrepreneurship
- Business Strategy

Units of Study - Option Units

- The Marketing Entrepreneurship Interface
- Financial Management for the Small Firm
- Commercialization
- Corporate Entrepreneurship
- Internationalization
- Small and Medium Enterprise Policy Studies

Entrepreneurship Doctoral Program

This program is intended to offer PhD students an opportunity to undertake research in some aspect of entrepreneurship or small business. Since 1988 13 students have graduated, and a further 6 are in various stages of progress. Considerable stress is placed on the ability of students to undertake and successfully complete innovative research within four years full-time or five years part-time. Research training is provided by the Faculty of Management for both full-time and part-time students.

Faculty Profile:

The faculty at Stirling consists of one senior lecturer and one senior teaching fellow.

Entrepreneurship Centre: The entrepreneurship centre at Stirling delivers the entire program.

(<http://www.stirling.ac.uk>)

APPENDIX 7: THE SWINBURNE UNIVERSITY OF TECHNOLOGY

Melbourne, Australia

Swinburne Program is called the Master's of Enterprise Innovation and operates within the Faculty of Engineering.

Mission/Objectives:

The primary aims of the program are:

- To emphasize the management of change and new opportunities rather than administration of established practices
- To develop a concentration on the planning and control of rapid business growth
- To achieve constant attention to integrating knowledge through interdisciplinary approaches rather than separating knowledge into functional specialties
- To seek a commitment to the notion of "theory for practice's sake" – a focus on applying leading edge theory to seek practical solutions to complex real-world problems.

At the completion of this integrated program, it has been shown that graduates are capable of starting, developing and managing new business opportunities to achieve company growth

Teaching Methods:

Based on integration of Master's level academic materials and applied experiential learning. The academic learning is provided by experienced professors using Harvard style case studies and research, readings from research journals and books, and an entrepreneurial research project.

All courses from the 2nd year on are team taught, typically by one academic practitioner and one practitioner academic. This allows for both the experience and theoretical biases to be incorporated into the program. From the outset, students are encouraged to search for innovative opportunities, participate in "live" growth ventures, and be involved in consulting relationships – all done in conjunction with appropriate readings.

While the program is successful in producing entrepreneurs, the academic character of the program is not being compromised. Approximately 10% of the graduating Master's class have been enrolling in Ph.D. programs.

Design: Three-year program – flexible program and entrance requirements depending on the level of study the student wishes to pursue

1st year - Graduate Certificate

The Entrepreneurial Organization/Opportunity Evaluation Techniques
New Venture Marketing/Commercializing Innovation

2nd year- Graduate Diploma

Innovation, Creativity and Leadership/Managing the Growing Business

New Venture Financial Planning/The Business Plan

3rd year - Master's Degree (Honors degree required to enter directly into Master's program)

Growth Venture Evaluation/Advanced Business Plan 1

Entrepreneurial Research Project 1

Strategic Intent and Corporations/Advanced Business Plan 2

Entrepreneurial Research Project 2

Faculty Profile:

Core academic (tenured) faculty is equivalent to 5 full-time professors, with qualifications in marketing, finance, manufacturing, organizational behaviour and strategy. One is strictly academic, four have experience in business creation (academic practitioners). Teaching resources are also drawn from successful practitioners in the field with acceptable academic credentials (practitioner academics) and successful practitioners with only one degree.

Highest Degree	Academics	Academic Practitioners	Practitioner Academics	Practitioners
Ph.D.		4+	2^	
Master	1	1*	4^	
Bachelor of Engineering				2
Total	1	5	6	2

+ One professor _ time appointment

* _ time appointment

^ Single course appointment

Centres for Entrepreneurship:

The Australian Centre for Entrepreneurship and Innovation (ACEI) is located in the Swinburne Graduate School of Management and runs the three-year Master of Entrepreneurship and Innovation (MEI) degree. ACEI also supervises Ph.D. candidates, creates case studies, teaching materials and curricula to enhance Entrepreneurship education programs delivered by Swinburne and other universities and teaches courses in the practice of Entrepreneurship research. ACEI also explores funding opportunities for the program through businesses. One of these opportunities is to establish a scholarship fund in order to offer research scholarships to candidates with the potential of significantly contributing to entrepreneurship knowledge. Another opportunity is to endow a chair to help create professorial chairs in specialist areas of Entrepreneurship Research. Another is to sponsor aspects of the existing research program. Businesses are also encouraged to initiate a new course(s) of research in an area relevant to them and add

them to the program. ACEI also seeks businesses to Support and enhance the seminar series they offer which feature Australian and world leaders in the fields of entrepreneurship, innovation, creativity, venture capital and related areas. Finally, ACEI will work actively with any contributing organization to ensure you derive maximum taxation, publicity and knowledge benefits from your contribution to Entrepreneurship Research.

(<http://www.swinburne.edu>)

APPENDIX 8: UNIVERSITY OF CALGARY

Alberta, Canada

The Enterprise Development MBA operates within the Faculty of Management.

Mission/Objectives: not available on the website

Teaching Methods: The MBA in Entrepreneurship utilizes team teaching, with both academics and practitioners involved in delivering the entrepreneurship electives. A number of these courses include hands-on experiential learning. The Client Project Clinics are fully experiential, as students work with actual SME clients.

Design: The Calgary MBA in Entrepreneurship consists of 20 courses (advanced standing is open to students with an appropriate background). The program can be completed on a full-time basis over two academic years (16 months) or on a part-time basis. Students begin with 10 required courses designed to develop an interdisciplinary understanding of management. The following are required courses:

- Introductory Financial Accounting
- Management Accounting
- Managerial Finance
- Working Effectively with People
- Management Information Systems
- Managerial Economics
- Business Analytics
- Strategic Business Analysis
- Marketing Management
- Operations Management

Students are also required to complete two integrative courses:

- Strategic Management
- Global Environment of Business

The program also requires completion of eight elective courses in entrepreneurship selected from the following list:

- Introduction of Business Venturing
- Introduction to Entrepreneurship
- Opportunity Identification
- New Venture Planning
- New Venture Startup
- New Venture Entrepreneurship
- New Venture Consulting
- Client Project Clinic I (Fall Term)
- Client Project Clinic II
- New Venture Finance

A PhD is also available in Entrepreneurship with the approval of the Chair and support of a professor to act in an advisory role.

Faculty Profile:

Faculty members are recognized nationally and internationally for their academic research and innovative programs and curriculum designs. Many professors have credentials extending beyond the academic and professional realms. This combination of academic and real world experience has an immediate impact in the class, where current business experiences and innovations become immediately available to students. Extensive use of guest lecturers provides further grounding in current business practices.

Educational Level	Academic	Academic Practitioner	Practitioner Academic	Executive in Residence	Project Co-ordinators
PhD	2	1		1	
MBA		1	1	1	2

Terms: 'Academic' refers to core academic and/or tenured faculty.

'Academic Practitioner' refers to academics who have experience in business creation.

'Practitioner Academic' refers to successful practitioners in the field with acceptable academic credentials.

'Executive in Residence' refers to a highly experienced practitioner who acts as a mentor to students and faculty as well as instructing one or more courses.

There are other instructors supplementing the core staff for this program including project co-ordinators and legal counsel. These individuals assist in developing the practical 'real-life' entrepreneurial exercises undertaken by the students.

Centre for Family Business Management and Entrepreneurship:

Established in 2000, the Centre for Family Business Management and Entrepreneurship's mission is to develop, promote, and facilitate research on family business management and Entrepreneurship, and to disseminate that research to family business owners, managers, and professionals, as well as to students at the undergraduate, masters, executive, and doctoral levels.

To accomplish this the Centre sponsors a number of activities:

- Guest speaker series
- Case writing grants
- Develop and deliver educational programs
- Course-based educational advancements
- Student projects
- Conduct, promote and support basic applied research
- Provide a resource information service
- Joint initiatives with University of Alberta and other partners in family business development.

(<http://www.ucalgary.ca/>)

APPENDIX 9: UNIVERSITY OF DURHAM

Durham, England

“Delivered by the Centre for Entrepreneurship and the Foundation for Small and Medium Enterprise Development, the MA in Entrepreneurship is the result of a wealth of experience of researching, teaching, understanding and working with entrepreneurs across all business and organizational sectors both internationally and in the UK. The MA in Entrepreneurship is designed to provide a holistic learning experience and, to take account of the busy lives of participants and incorporate the realities of their workplace, is offered over 21 months on a part-time basis.” (<http://www.durham.uk>)

Mission/Objectives:

In an environment of increasing uncertainty and dynamism successful organizations require to be developed and led by individuals with the flexibility, market awareness, networks skills and insight required to forecast, identify and respond to changes in what is a turbulent and complex environment. The MA in Entrepreneurship seeks to work with individuals to develop and strengthen these behaviours and skills. Breaking the mould of traditional management education, this program is intended to create a stimulating and supportive environment in which individuals across all business and organizational sectors can explore entrepreneurship and develop and strengthen their entrepreneurial skills and behaviours. By engaging in a cumulative learning experience, it is hoped that participants can acquire the knowledge, understanding, tools, frameworks and skills needed to achieve personal, professional and organizational objectives.

Teaching Methods:

The team that comprises the Centre for Entrepreneurship has a strong belief in the need to capture the value contained in what is already a wealth of information and experience in the field of entrepreneurship. Accredited courses, such as the postgraduate masters degree in Entrepreneurship, are offered with a mix of lectures and experiential learning activities. The practical exercises include work with clients and case studies. The clients are representative of the economic, social and cultural diversity of the British and International communities. They include owners and employees of the public, private and voluntary sectors from micro businesses and SMEs through to multi-national corporates and corporations. The use of case studies as a medium for teaching and training has been adopted at many levels and in many business related contexts of education. They are used to illustrate the application of theories and practice the use of analytical skills. A key feature of information delivery is the use of new learning technologies and the Internet to facilitate the development of entrepreneurship and entrepreneurial behaviour.

Design:

The MA in Entrepreneurship commences annually in late January with a five day Induction Program. During this time, participants are introduced to the Business School and the University and are given the opportunity to start developing relationships with one another and also with the course team. Designed to provide an integrated learning

experience, the MA in Entrepreneurship is comprised of the following courses which are offered two to three days each month and identified below:

The Changing Entrepreneurial Society:

Considers those drivers which account for the emergence of the ‘Entrepreneurial Society’ and discusses the impact which these have at an individual, organizational, governmental and global level.

The Personal Development of Entrepreneurial Behaviour:

Explores the characteristics and behaviours of successful entrepreneurs and encourages participants to identify where and how they can benefit by developing and strengthening their own entrepreneurial behaviours.

Understanding the Business Development Process:

Reviews alternative approaches to business development and develops strategies for managing the development, growth and change of organizations.

The Design and Development of Entrepreneurial Organizations:

Discusses what meaning and relevance ‘entrepreneurship’ has for organizations across all sectors. Identifies organizational structures which support and foster entrepreneurship.

Managing the Task Environment:

Examines the context and environment within which entrepreneurs, enterprises and organizations exist and identifies alternative strategies and tactics for effectively managing and responding to this environment.

Managing Within an Entrepreneurial Culture or ‘The Golden Thread’:

Works with participants to identify and map their learning as they progress through the program and ultimately to identify, develop and strengthen the skills and insights needed to manage entrepreneurially.

Dissertation

The final component of the MA in Entrepreneurship invites participants to explore a specific issue or topic in the area of entrepreneurship in depth. The dissertation is also an opportunity for participants to address a personal or organizational project in which they have some interest and to develop a piece of work which has tangible, practical implications. Dissertations of around 15,000 words also provide participants with the opportunity of developing the managerial and research skills necessary to undertake a detailed individual piece of work.

Assessment

The MA in Entrepreneurship is assessed on a continual basis. As there are no exams each course is assessed by a piece of coursework which varies throughout the program and is designed to assess the specific objectives of individual courses.

Entry Requirements

Applicants should possess an undergraduate degree or an equivalent professional qualification. Alternatively they should be able to demonstrate that the experience they have acquired is relevant to their application to study entrepreneurship.

Faculty Profile:

The MA in Entrepreneurship is delivered through the Barclay's Centre for Entrepreneurship. The faculty is comprised of six staff at present. Between them, they represent a balance between academic strength and commercial experience and capability. It is not our intention to grow in size but to grow in capability and contribution by working closely with partners to meet the needs of what is an increasingly extensive client group. Current projects focus upon corporate entrepreneurship, entrepreneurial marketing, small business development, social entrepreneurship, and entrepreneurship within Higher Education.

Centre For Entrepreneurship:

The Barclay's Centre for Entrepreneurship is a spin out from the former Small Business Centre and was established in response to the rapidly changing global environment and the increased relevance of entrepreneurial behaviour and entrepreneurship in a wider range of contexts including larger organizations, the social sector and the public sector. The Centre received an immense boost by securing a £1.5 million sponsorship deal with Barclays. This partnership with Barclays adds value to the Centre by ensuring that commercial and practical objectives are given the same priority as academic and research interests.

(<http://www.durham.uk>)

APPENDIX 10: UNIVERSITY OF SOUTHERN CALIFORNIA

Marshall School of Business, Los Angeles, California

Mission/Objectives:

To help students develop an entrepreneurial attitude of being open to change, developing new ideas and thinking outside the box and beyond the limitations of existing paradigms. The blend of tools, skills and attitude offered is intended to equip graduates with the ability to organize and manage new ventures.

Teaching Methods:

The majors program features team teaching by full-time entrepreneur professors, entrepreneur program alumni, members of the advisory board and other guest speakers. Full-class lectures are augmented with small workshops and seminars, 'fireside' chats and networking events. The curriculum builds on the base of business knowledge students have acquired in their business courses and focuses on the pre-start-up, start-up and early growth of new ventures.

Design:

While there are three Entrepreneurship courses offered to non-entrepreneur and non-business majors, the bulk of the courses are designed to fit two Entrepreneurship programs, an undergraduate major and a graduate program.

Undergraduate Program: Offered to Senior students of the Business School majoring in Entrepreneurship.

- Introduction to New Ventures (451)
- Feasibility Analysis (452)
- Starting and Growing the New Venture (453)
- The Business Plan (454)

Graduate Program: Open to all Masters Level Students. Courses are more in depth than those offered in the undergraduate program.

- Introduction to New Ventures
- Feasibility Analysis
- CEO/Founder Cases in New Venture Management
- Business Plan
- Managing Emerging Growth Companies
- Technology Commercialization

Faculty Profile:

The Majors program and the Graduate Program feature team teaching including:

- full-time entrepreneur professors who bring a variety of entrepreneurial experiences and academic expertise to the classroom
- Entrepreneurship Program alumni
- Members of the Advisory Council (Entrepreneurs)
- Guest Speakers

Currently there are 8 members of the faculty, two are academics and 6 have solid academic credentials coupled with extensive experience as entrepreneurs.

Centre for Entrepreneurship:

The courses are delivered through the *Lloyd Greif Centre for Entrepreneurial Studies*. The Lloyd Greif Centre is dedicated to bringing students cutting edge information in the field of entrepreneurship. To accomplish that goal, the program takes advantage of the wealth of technology at USC to bring students, faculty, and alumni together to share information and network through e-mail and The Lloyd Greif Centre website. Students will also enjoy the benefits of technology in the learning environment as they take advantage of interactive, multimedia educational experiences.

The Entrepreneur Venture Management Association (EVMA) at the Marshall School of Business is a non-profit organization committed to serving and supporting all USC Graduate students interested in venture management and entrepreneurship. The EVMA stresses quality in action. We encourage the entrepreneurial spirit, and have an openness to new ideas and innovations that allow us to better serve our members. The EVMA further believes that as entrepreneurship is best learned through example, the goal of the EVMA is to give its members the opportunity to meet entrepreneurs from a variety of businesses and backgrounds. The EVMA thus augments the graduate school experience by sponsoring programs and events that provide students with direct exposure to successful entrepreneurs, capital providers and business professionals.

Purpose of EMVA:

- Educate students regarding the challenges and issues faced by the venture management community.
- Expose members to the business development process and provide hands-on experience.
- Provide a forum to encourage and foster new ideas and innovations.
- Promote and further develop USC's reputation as the top graduate school in entrepreneurship.
- Support the diverse talents from ALL USC graduate schools
- Form the foundation for future projects and companies.

The EVMA strives to bring together Marshall students who believe in innovation, not imitation. By putting together entrepreneurial-minded students and various professionals active in the venture management community, the EVMA represents a unique resource in your business school experience. Numerous events scheduled throughout the year put EVMA members in contact with successful entrepreneurs, venture capitalists and other players in the entrepreneurial community. EVMA has formed a Technology Alliance among the Marshall School of Business, the School of Engineering / Computer Science and the School of Medicine to foster new ideas and connect business with technology solutions. Likewise, other events are designed to promote the Marshall relationship with the professional community.

[\(http://www.marshall.usc.edu/entrepreneur/\)](http://www.marshall.usc.edu/entrepreneur/)

APPENDIX 11: UNIVERSITY OF VICTORIA ENTREPRENEURSHIP PROGRAM

Victoria, British Columbia

The Entrepreneurship concentration in the Bachelor of Commerce degree program will teach students how to be an entrepreneur, instead of merely teaching about entrepreneurship. This concentration prepares students to take full advantage of the growing number of entrepreneurial opportunities in the new millennium. Family enterprise, global entrepreneurship, and entrepreneurship services are the focus of this innovative program. Dr. Ron Mitchell has created the UVic model of entrepreneurship education. The essential philosophy behind this model is the notion of venture completeness. The rationale behind this philosophy is that venture completeness minimizes venture risk.

(http://www.business.uvic.ca/bcom/features_entrepreneurship.html, 2001)

Mission/Objectives:

We are a committed group of scholars/educators who aim to provide world-class entrepreneurship education consistent with the Faculty of Business mission of the international experience, to undergraduate and graduate students at the University of Victoria. This education enables people to enact successful transactions anywhere on the globe, by helping them to master the cognitions, skills, experiences and necessary relationships to achieve recognized expertise in their chosen endeavors within five years of graduation.

Teaching Method:

The approach is based on concepts of expertise acquisition theoretically grounded in Transaction Cognition Theory as the defining content element; focused on individualized education; based on a full immersion programmatic experience; integrative in delivery by the teaching team. This integrated approach is designed to help students gain tacit and explicit knowledge, thereby decreasing venture risk. As well, this concentration area has two features unique to the University of Victoria Faculty of Business: the development of an entrepreneurship portfolio; and the use of computer aided decision models which provide expert assistance through information technology, providing an "entrepreneurial technology" that sets our students apart from all other entrepreneurship students.

Design:

This is a four year co-op program. The first two years are similar to most commerce degrees following a co-op program, requiring students to take general business courses. In the third and fourth years the program focuses on Entrepreneurship and practical application through developing an entrepreneurship portfolio and co-op work experience.

Courses Specific to Entrepreneurship:

- Venture Marketing Expertise
- Venture Planning/Finance Expertise
- Acquiring Expert Venture Cognitions
- Portfolio Practicum

MBA in Entrepreneurship:

Key Elements:

1. A sixteen-month experience starting with a core semester of five courses taught as one, followed by an eight-month practicum and then either a specialty academic term or international exchange.
2. Experiential learning that results in production of an individualized personal entrepreneurship portfolio.
3. Emphasis is placed on cognitive development rather than on marks, and the program is designed to reflect that.
4. Provide a “life-long learning” expertise enhancement system.
5. Link experiential learning to real projects in the community.

Faculty Profile:

Core academic (tenured) faculty is made up of two full-time professors. There is also one full-time associate (non-tenured) professor. These professors teach the experiential and theoretic sections of the Entrepreneurship Major and the MBA in Entrepreneurship.

	Academic	Academic Practitioner
PhD	2	1

Centre for Entrepreneurship:

The International Consortium for Venture Expertise has been instrumental in developing the entrepreneurship curriculum in conjunction with the University of Victoria – “The Venture Ready Model”. While the centre offers support to students, it also develops new curricula are for mid-career individuals and high school educators with targeted programs that fit their needs. As well, it offers an annual workshop for Entrepreneurship Educators.

Noteworthy Accolades:

These programs have resulted in peer-reviewed recognition in the form of:

1. The USASBE Model Undergraduate Entrepreneurship Program Award, presented at the US Association for Small Business and Entrepreneurship Annual Meeting, San Antonio, TX, February 19, 2000.
2. The 1999 Academy of Management Entrepreneurship Division “Innovation in Entrepreneurship Pedagogy Award,” presented on August 9th, at the 1999 Annual Meeting held in Chicago, IL.

(<http://www.business.uvic.ca/>)

APPENDIX 12: UNIVERSITY OF WASHINGTON

Program in Entrepreneurship and Innovation Seattle, Washington, United States

Mission/Objectives:

The Program in Entrepreneurship and Innovation (PEI) is the University of Washington's centre for entrepreneurship education, research, innovation and outreach. PEI is leading the country in building a community of discovery and innovation that:

- Creates partnerships with leaders across the UW campus and the business community
- Breaks down old barriers to discover new models for interdisciplinary research and education
- Provides challenging educational opportunities
- Creates new business enterprises
- Builds and contributes to the strengths of the region

Teaching Methods:

The Program in Entrepreneurship and Innovation relies on a network of people to give the program substance and breadth. The Program in Entrepreneurship and Innovation (PEI) faculty use their research and knowledge of marketing, finance, sales, management, and strategic planning to develop practical and useful entrepreneurship courses. The Advisory Board lends their expertise to the PEI curriculum and their knowledge of the Northwest entrepreneurial community to the students in the program. The students who volunteer their time as officers in PEI Club apply their energy and enthusiasm to help improve the quality of the program for future students.

The program consists of regular coursework and lectures and is augmented by practical and experiential learning delivered through cases, a High-Tech Entrepreneurship speaker-series, case competitions, the PEI Club, venture creation, actual business consulting work and mentorship.

Design:

PEI's courses and activities prepare these students for entrepreneurial action by developing their managerial and technical business skills, their base of corporate contacts, and the experience and confidence that will enable them to succeed in their endeavors. There are two programs, the undergraduate Certificate in Entrepreneurship and the Masters in Entrepreneurship for MBAs and other graduate students. Application to the program requires a resume and the completion of an essay relating to entrepreneurship.

Undergraduate Program:

Prerequisites for this program includes completion of the core courses of the first two years of a Business Degree (managerial accounting, business finance, information systems, international business, marketing concepts, operations management, etc.) and enrollment in Creating a Company course.

Students must take the five PEI core courses, participate in the PEI club, attend the High-Tech Entrepreneurship Speaker Series and enter the Business Plan Competition.

Core Courses:

- Creating a Company (Full year)
- Entrepreneurship
- Business Planning for Entrepreneurs
- Marketing Issues for New Ventures

Electives:

- Principles of Selling
- Practicum in Entrepreneurship
- Small Business Management
- Special Projects in Entrepreneurship
- Software Entrepreneurship
- New Venture Finance
- Negotiations
- Internet Marketing

Graduate Program:

Prerequisites for this program includes completion of an undergraduate degree. Students must take the five PEI core courses, participate in the PEI club, attend the High-Tech Entrepreneurship Speaker Series and enter the Business Plan Competition. As well, MBAs enrolled in the course must have completed a PEI Consulting Network project during their first year in the program.

Core Requirements:

- Entrepreneurship
- Marketing Issues for New Ventures
- Developing New Venture Plan
- Managing the Sales System for New and Ongoing Ventures

Electives:

- Competing on the Internet
- Integrated product Development
- Intrapreneurship and Corporate Venturing
- New Venture Financing
- New Venture Practicum
- Software Entrepreneurship
- Strategic management of Technology and Innovation

PEI Consulting Network Project:

Projects teams (2-4 1st year MBA students, 1 second year MBA student as a mentor, and a professional consultant advisor) assist businesses over a one year term in such areas as marketing, finance, operations, information technology and business plan development.

Faculty Profile:

The faculty of PEI charged with delivering the Entrepreneurship Programs consists of 23 individuals. Of these, twelve are instructors with academic credentials and eleven are PhD's, five of which have experience in the private sector and one with extensive personal experience in venture creation.

Centre for Entrepreneurship:

The Program in Entrepreneurship and Innovation (PEI) is the University of Washington's centre for entrepreneurship education, research, innovation, and outreach. The centre is the delivery agent for the PEI programs and also coordinates the other activities in which PEI students are expected to be involved. As well they offer support and provide a network for students in the program.

Activities:

High-Tech Entrepreneurship Speaker Series – every second Tuesday evening a high profile entrepreneur is brought in to discuss their start-up experiences and issues related to rapid-growth firms.

PEI Consulting Network – A student run MBA group that offers pro bono consulting services for start-up and early-stage firms.

EAT Lunches – Invites entrepreneurs to campus to meet with small groups of students who share common interests (weekly during sessions) in order to share ideas and network with successful entrepreneurs.

Business Plan Competition – The competition is designed to promote student ideas and venture creation by providing a forum in which students can present new business concepts to local venture capitalists, entrepreneurs, and investors. Through their interaction with the judges, the students gain invaluable professional feedback on their plan and can make the contacts that may provide them with the funding needed to implement their plan.

The UW Business Plan Competition provides students with opportunity to:

- Win a \$35,000 grand prize. The total funding package is more than \$90,000, with special prizes for the best ideas in e-commerce, technology, retail/service, socially responsible business, and international business.
- Receive (free) access to experts in finance, marketing strategy, presentation skills, and law to assist in the development of a viable business plan.
- Present the business plans for a new product or service to Washington's entrepreneurial leaders, providing an opportunity to make contacts, practice pitching ideas, and obtain critical feedback to improve the possibility of success for the venture.
- Network with Seattle's top entrepreneurs, deal-makers, and business professionals. Northwest venture capital firms and investment angels are part of the panel of judges and they're looking for new business ideas to fund.

(<http://www.washington.edu/>)

APPENDIX 13: VAXJO UNIVERSITY

Vaxjo, Sweden

Vaxjo's Program is called The School of Management and Economics and operates within Department of Leadership, Entrepreneurship, Organization otherwise known as LEO.

Mission/Objectives:

Vaxjo University has three central values; renewal, to be close, and reflection. Renewal encompasses new course literature, research projects, student programs and the way they administer and manage the school. Their ambition is to have short distances between people. Vaxjo believes this encourages learning, creativity and innovation. Furthermore, reflection is also a central value to the university. For them, it is important to think about and reflect upon phenomena in the world and to learn from others.

Teaching Methods:

The program is delivered utilizing general course work and lectures, casework, experiential projects and affiliations with local small firms.

Design:

In 1998 the school's former name was, "The Entrepreneurship and Business Development Program". Vesper and Gartner identified these course offerings for Undergraduate and Graduate business students which were listed in 1998.

Courses offered to Undergraduate Students:

During the two introductory and general undergraduate years a course in Venture Creation is compulsory which means that about 200 students are attending it every year.

The main offer is a one full year specialization after two initial undergraduate years in Entrepreneurship and Business Development. On average 18 students (out of 120 graduates for the Undergraduate Program) make this major:

- Introduction to Entrepreneurial Studies
- Project Management
- Marketing in the Small Firm – Dialog and Sales
- Competence Development and Consulting in the Small Firm
- Accounting for Change
- Logistics in a Small-Firm Setting
- Special Project (tailored to the firm where the student does his/her internship)

Courses offered to Graduate Business Students:

Two one-term (5 months) courses are offered as optional: Innovation and Design Management, and Leadership and Entrepreneurship. 30 and 10 students respectively follow those courses each year. These Master programs for full-time students, besides reading courses, include a Master thesis in the field.

In the full one-year program the students interface with the business community. They are individually affiliated with small firms in the region where they spend one or two days a week working on reports relevant to both the firm and the relevant academic work. In the course unit on Venture Creation the students in groups of three help “real” new – starters with issues which appear important to the latter e.g. with making a Business or Marketing Plan, providing cost analysis or support in the development of the product.

Since 1998 Vaxjo University has restructured the program and renamed it, “The School of Management and Economics.” Current research into the Vaxjo University website (last updated in the year 2000) identified these course offerings below, please note that the language the courses are delivered in is English and/or Swedish:

- Doing Business in Europe (English)
- Entrepreneurship and Leadership in the New Economy (Master, Swedish)
- Entrepreneurship and Small Business Doctoral Program (Doctoral Program, English)
- Innovation and Design Management (Master, Swedish)
- International Business (Swedish)
- Management and Organization Program (Advanced Graduate, Half year, English)
- Managing Dynamic Organizations (Master, Full year, English)

Faculty Profile:

Situated at the Vaxjo School of Management and Economics the program staff includes one core academic (tenured) faculty who is also the chair as well as 4 professors and 4 lecturers with qualifications in accounting, organizational behavior, leadership, management and innovation. There are five junior teachers finalizing their doctorate in various fields.

Centres for Entrepreneurship:

The Department of Leadership, Entrepreneurship, and Organization (LEO) conducts extensive research in a number of subjects, methods and perspectives. A great deal of the research concerns entrepreneurship and business development. There is also a connection to SIRE (Scandinavian Institute for Research in Entrepreneurship), a network that includes Lund University and Halmstad University.

(<http://www.xvu.se/utb>)

APPENDIX 14: WHARTON SCHOOL OF BUSINESS

University of Pennsylvania, Philadelphia, Pennsylvania, United States

Wharton's Goergen Entrepreneurial Management Program is one of the largest entrepreneurial courses in the world, offering more than 20 courses every year to more than 2,000 students and executives.

Mission/Objectives:

"To provide Entrepreneurial Management Major/MBA students with skills, analytical tools, perspectives, and experiences which prepare him/her for a career as an autonomous entrepreneur, a family-business entrepreneur, or a corporate entrepreneurship career."

Objectives:

1. Build an entrepreneurial network at Wharton and U Penn based on quality events programming.
2. Develop a career-search infrastructure for providing access to information and job opportunities at aggressively growing startups.
3. Foster the development of new business through ongoing series of workshops, entrepreneur-executive speeches, the E-conference and continued support of the business plan Competition.

Teaching Methods: Not specified on Web-site.

Design:

The program offers a wide range of entrepreneurial courses, with majors being offered in both the Undergraduate and Graduate programs. It is interesting to note that students are also given the opportunity to design an individualized major in entrepreneurial management under the tutelage of a faculty member

Undergraduate Courses in Entrepreneurial Management:

Chinese Business Enterprise in the Global Context
Entrepreneurial Decision Making
Entrepreneurial Venture Initiation
Entrepreneurial Venture Initiation: Management of Family Enterprises
Field Experience in Small Business Consulting

Masters in Business Administration Major and Courses:

The major consists of five credit units:

- One credit unit of the Management Core
- Entrepreneurship and Venture Initiation, is required for the major and is a prerequisite to many of the entrepreneurial courses.
- Three credit units of the following:
Product Design and Development; Negotiations; Management of Technology; Venture Capital and Private Equity; Entrepreneurial Marketing; Innovation, Change & Entrepreneurship; High

Technology Entrepreneurship; Venture Capital and Private Equity Management; Wharton Technology Entrepreneurship Internship; New Ventures: Implementing Your Business; Plan and Managing Growth; Internet Entrepreneurship; Entrepreneurship Through Acquisition; Legal Aspects of Entrepreneurship; Strategies and Practices of Family-Controlled Companies; Advanced Study Project in Entrepreneurial Management; Independent Study in Entrepreneurial Management

Faculty Profiles:

A faculty of over 20 professors and practitioners teach courses for undergraduate and graduate students and guide initiatives for a range of entrepreneurs, from high school students to senior executives. Of these twenty faculty members, four are tenured standing professors and the remainder hold various levels of both academic and professional accreditation.

Centres for Entrepreneurship:

While there is no mention of a specific centre for entrepreneurship, there is an entrepreneurial network. The Entrepreneurial club at Wharton enhances the entrepreneurial experience at the school by combining all the resources located within Wharton and establishing both an internal and external network which is supported by both the school and the community. “The EClub has become the university’s premier networked resource to promote entrepreneurial activity among students, alumni and researchers who are starting, working for, or advising new businesses in high growth environments”

(wysiwyg://http://www.wharton.upenn.edu/mba/curriculum/mgmt_em.html)

The club draws on the following resources when solidifying the Entrepreneurial network:

1. Wharton Entrepreneurial programs
2. Snider Entrepreneurship Research Centre
3. Georgen Entrepreneurial Management Program
4. Wharton Business Plan competition (\$25 000)
5. Wharton Small Business Development Centre
6. Technology Entrepreneurship Club (SEAS)

(wysiwyg://http://www.wharten.upenn.edu/mba/curriculum/mgmt_em.html)

APPENDIX 15: ENTREPRENEURIALIZING THE LEARNING ENVIRONMENT

The Atlantic Colleges Committee for Entrepreneurial Development has designed a model for a professional development workshop which allows instructors to understand what an entrepreneurial learning environment is and how it can be created in the classroom. The workshop is available in both French and English.

Mission/Objectives:

- To position Atlantic Canadian colleges as recognized leaders in Entrepreneurial Education, practices and culture in order to foster economic growth.
- To develop entrepreneurial mindsets in the learner through creation of entrepreneurial learning environments.
- To experience a college environment where the entrepreneurial culture is a priority.

Teaching Methods:

“Instructors are taken on an experiential journey. They become the learners. Over the two and one-half days, they develop a deeper understanding of the risks associated with taking an entrepreneurial approach in the classroom, and learn how to manage those risks effectively. They also learn from one another by sharing their best practices. Throughout the workshop, instructors are challenged to relate all of the material to their classroom situation. They are encouraged to infuse entrepreneurship into their daily teaching situations.”

Workshop Design:

The workshop design is grounded in teaching methodology. It includes traditional teaching, an opportunity for introspection, learning from learner’s (student panel), learning from practitioners (Dining with Dynamo’s - students who have become successful entrepreneurs), sharing of best practices in entrepreneurial teaching methods, discussion of possible resistance from students and open discussion of the prospect of creating an entrepreneurial learning environment.

APPENDIX 16: THE ENTREPRENEURIAL SKILLS PROGRAM (ESP)

Dalhousie University, Halifax, Nova Scotia and The University College of Cape Breton, Sydney, Nova Scotia

The Entrepreneurial Skills Program (ESP), at Dalhousie University and at the University College of Cape Breton (UCCB), is a certificate program in entrepreneurship that is available to students in all disciplines as a complement to their existing degree programs and was developed to assist students in all disciplines to explore, develop and utilize the entrepreneurial option. “ESP builds on the Swinburne model and utilizes a multi-path pedagogy that uses experience as a teacher and makes the student an integral part of the learning plan” (Leach and Mortley, 2000:13). Dalhousie University and the University College of Cape Breton both implemented a program called the Entrepreneurial Skills Program (ESP). “The individual course of study is tailored to meet the key stage entrepreneurial outcomes and students receive the appropriate additional support” (Leach and Mortley, 2000: 13). This model is of interest because it not only stresses experiential learning but it is a certificate program that is available to complement an existing degree program for students of all disciplines.

The Centre for Entrepreneurship Education and Development¹ (CEED) developed the ESP program for Dalhousie University and the UCCB with the goal of increasing the number of graduates who start their own businesses, thus advancing the entrepreneurial culture in post-secondary education. CEED also offers the *Atlantic Entrepreneurship Educators Symposium*, which provides Atlantic Canadian entrepreneurship educators, at all levels, with the opportunity to network and examine strategies for working together.

Mission/Objectives:

ESP was developed to assist students in all disciplines to explore, develop and utilize the entrepreneurial option.

Teaching Methods:

The ESP process entails instructors facilitating the theoretical aspects of the program and a coordinator facilitating the non-classroom or support aspect of the program in collaboration with the instructor. The coordinator will ensure that students are given the additional, non-curricular support they need to successfully complete the program. Students will be provided with support and counseling throughout the program. Both the instructor and the university ESP coordinator will enlist the services of experts, mentors, entrepreneurs and others to assist students to achieve their goals. The coordinator will be responsible for student assessment, monitoring, counseling and the implementation of the ESP framework. He/she will also facilitate peer group sessions and interdisciplinary

¹ CEED is a provincially funded organization with the mandate to encourage youth entrepreneurship through entrepreneurship education, research and program design, professional development, and community entrepreneurship.

clinics, help with portfolio development, encourage networking sessions and provide general support. The instructor should be cognizant of, and conduct activities in a manner that will accommodate the support of the coordinator. The instructor is encouraged to communicate frequently with the ESP coordinator to synchronize and harmonize the classroom learning with the non-classroom learning.

Design: ESP is offered as a four-year or three-year program.

1st Year-Two single semester foundation classes
Introduction to Management Issues I.
Introduction to Management Issues II.

2nd Year-Two, one-semester classes, designated by the student from their degree program and approved by the counselor, that support his/her venturing plan

3rd Year- Two, one-semester classes, designated by the student from their degree program and approved by the counselor, that support his/her venturing plan (If choosing the three-year program option then the two-semester capstone course is taken during this year)

4th Year-A two-semester capstone class, to be developed.

Activities for Learning and Assessment:

Mandatory Components:

Mini-Venture (ESP Required Activity) – Students are directed to start a business with an investment of one dollar. They are to design a product or service, deliver it and report back within a week.

Interview (ESP Required Activity) – Interview an entrepreneur. Make sure that the entrepreneur “knows something that you want to learn about.”

Personal Venture Portfolio (ESP Required Activity) – This is a project that extends over the full Foundation Course period. It is intended to be a living document that will be amended as the student progresses through ESP, and is meant to be the repository for documentation that connects the student to his/her venturing interests.

Faculty Profile:

Core academic (tenured) faculty is equivalent to 1 full-time professor with qualifications in finance, accounting, information technology, management science and economics at The University College of Cape Breton (UCCB). At Dalhousie University (Dal) the core academic faculty is equivalent to 1 practitioner academic with an MBA from the University of Western Ontario, a CMA from the Society of Management Accountants, a B.Comm from Dalhousie University.

Highest Degree	Academics	Academic Practitioners	Practitioner Academics	Practitioners	Coaches*
Ph.D.	1 (UCCB)				
Masters			1 (Dal)		
Bachelor					
Total					2-1 UCCB 1 Dal

****Terms:** “Coach” refers to a coordinator facilitating the non-classroom or support aspect of the program in collaboration with the instructor. The coordinator will ensure that students are given the additional, non-curricular support they need to successfully complete the program.*

‘Academic’ refers to core academic (tenured) faculty.

‘Academic Practitioner’ refers to academics that have experience in business creation.

‘Practitioner Academic’ refers to successful practitioners in the field with acceptable academic credentials.

‘Practitioner’ refers to a successful practitioner with only one-degree.

Centre for Entrepreneurship:

The Centre for Entrepreneurship Education and Development (CEED) developed the ESP program with the goal of increasing the number of university graduates who start their own businesses, thus advancing the entrepreneurial culture in post-secondary education. CEED also offers The Atlantic Entrepreneurship Educators Symposium, which is a symposium that provides Atlantic Canadian entrepreneurship educators, at all levels, with the opportunity to network and examine strategies for working together.

Other Programs: ACE-Dal; ACE-DalTech

APPENDIX 17: EXPLANATION OF ACRONYMS USED

ABI	American Business Institute
ACEI	Australian Centre for Entrepreneurship and Innovation
ACOA	Atlantic Canada Opportunities Agency
CEED	Centre for Entrepreneurship Education and Development
CATA	Canadian Advanced Technology Alliance
EBSCO	Elton B. Stevens Company
ERP	Enterprise Resource Planning
ESP	Entrepreneurial Skills Program
EVCA	European Venture Capital Association
EVMA	The European Venture Management Association
FEM	Foundation for Entrepreneurial Management
IMC	Intermediate Management Core
LEAD Award	Leadership and Excellence in Academic Development
LEO	Department of Leadership, Entrepreneurship, and Organization
MEI	Master of Entrepreneurship and Innovation
MTE	Minor in Technological Entrepreneurship
PEI Club	The Program in Entrepreneurship and Innovation
SBI	Small Business Institute
SIRE	Scandinavian Institute for Research in Entrepreneurship
USASBE	United States Association for Small Business and Entrepreneurship
WIIFM	What's In It For Me



Entrepreneurship in University
Environments

L'Environnement universitaire
de l'entrepreneurship

