

## **Virtual Enterprise Executive Summary**

University: City University of New York

Award Nomination: Innovative Entrepreneurship Education Courses

Name of Submitter: Dr. Anthony Borgese

### **For More Information**

Contact names: Dr. Stuart Schulman, Executive Director  
Dr. Anthony Borgese, IVE Fellow  
Telephone: 718-368-5143  
Fax: 718-368-4880  
Web site: [www.ive.cuny.edu](http://www.ive.cuny.edu)

### **Purpose and Mission of the Institute for Virtual Enterprise**

City University of New York (CUNY) Trustees approved the proposal advanced by Kingsborough Community College to create a university-wide Institute for Virtual Enterprise (IVE) as a special CUNY initiative in May 2002. IVE is structured to meet the rapidly evolving needs of today's students who require active learning, including simulations and problem-based learning in a student-centered, student-led learning community.

IVE's mission is to: 1) Enhance student engagement and success by building a strong foundation in Entrepreneurship, Financial Literacy and Leadership. IVE initiatives are characterized by being student-centered and student-led, faculty facilitated instruction, providing opportunities for applying academic learning in new curricula constructs, technology driven hybrid models, and close interaction with private sector and community groups.

2) Support IVE program components and faculty development that transforms teaching, support networks, and program dissemination strategies have been developed and deployed.

### **Description of Virtual Enterprise**

The Virtual Enterprise (VE) course is an experiential course in entrepreneurship, wherein students create, own, and operate their own virtual businesses in a global VE economy. It is NOT a computer program, and there is no software to purchase. The Virtual Enterprise course is a behavioral based, experiential simulation.

A typical Virtual Enterprise course starts with the instructor outlining the goals, objectives, and learning outcomes for the particular virtual enterprise course. This

depends on the composition of the students in that particular VE course as VE's have been administered to entrepreneurship students, students in career programs and liberal arts majors as well. Past VE courses have resulted in virtual, as well as real, businesses being created. It is usually up to the students and the instructor to choose which type of VE they wish to participate in. Students create VE firms by evaluating the VE global marketplace and then deciding on an industry, a business name, and a logo.

Once the type of business has been decided, students create a business plan, estimate start-up costs, and make an oral presentation to investors from the business community for virtual start-up capital. IVE provides virtual seed money at competitive interest rates, and provides all VE's with a corporate bank account. Students then pay bills, make inventory purchases and start to operate their virtual businesses. They learn the financial aspects of running a business by doing it, as opposed to just learning the theories behind financial management.

In addition to learning the financial aspects of running a business, students also learn the sales, budgeting, negotiation, human resources, and technology skills of running a business. For example, marketing plans have to be learned, created and implemented as well as other financial management skills. This includes creating advertising, estimating sales goals, as well as uploading products to the IVE Shopping Mall in order to sell or trade products and learn about ecommerce.

Educators have long quarreled about the best way to teach students. VE Instructors believe that the most useful way to teach a student entrepreneurship is through the use of applied education. If we can all agree as entrepreneurship educators that applied learning is the best method, then why are lecture methods still pervasive? IVE believes that lecture methods are still being utilized because entrepreneurship instructors do not have models that can balance engagement with content coverage, and VE does just that. Virtual Enterprise is one of the best ways for students to apply their business education, in a safe environment, before going into actual business practice. No other school or program offers that for all of its students. Rather a few select students who win business plan competitions and get limited seed money to start actual businesses. This is just not financially feasible to engage all students.

### **Unique Aspects of Virtual Enterprise**

There are a variety of unique aspects of Virtual Enterprise. First, VE is a unique method of teaching. Instead of merely attending classroom lectures on various subjects like marketing, finance and business, and students learn by doing by creating, advertising, marketing and business plans. One might argue that that is nothing more than any other experiential course. However, what makes VE really unique is the vastness of its network, which enables students to apply and hone the entrepreneurial skills they learn through the program.

Virtual Enterprise is not just for CUNY students. Through the efforts of IVE Fellows, VE has been adopted by numerous colleges throughout the United States, and abroad.

The following colleges have adopted Virtual Enterprise courses in some application: Shoreline Community College, Edmonds Community College, Howard Community College, Hayward Community College, Frostburg State, Rhodes State, Corporate College, Bellevue Community College, and Montgomery College.

Additionally, IVE has the following international partners: Randers Business College, University of Malta, University of Linz, University of Graz, the State Department of Kyrgyzstan, and other, numerous European Colleges. All of these colleges and universities provide a truly global business environment for VE students.

Another unique aspect of Virtual Enterprise is the MarketMaker component. ([www.ivefinancial.com](http://www.ivefinancial.com)) The MarketMaker is the educational, electronic, financial teaching tools that make the VE truly unique. The MarketMaker consists of: a virtual bank, a virtual stock market, virtual credit cards and a virtual ecommerce shopping mall. Each tool provides students with a valuable financial management skill.

The virtual bank simulates a real banking environment. When a new VE starts, students are given a virtual bank account, along with virtual seed money. By doing this, students learn valuable cash flow management skills, lines of credit, as well as payroll and other banking aspects of running a business. The virtual stock market can be used for anyone from graduate students learning the intricacies of an initial public offering, to undergraduates competing in a stock market/investing simulation.

The virtual credit card allows students to learn the skills of using credit properly. Virtual business credit cards are offered to virtual enterprise firms to make purchases and pay bills. Finally, the IVE Shopping Mall allows students to trade their virtual products in an electronic marketplace. After receiving the initial seed money to start a new VE, students are given access to upload their products to the IVE Shopping Mall. The IVE Shopping Mall is an electronic commerce marketplace for all virtual enterprise firms.

Ancillary activities and events also make Virtual Enterprise very unique. Many entrepreneurship programs have some sort of business plan competition, as does IVE. However, IVE offers other ancillary activities as part of a Virtual Enterprise course. It is up to the instructor, or the student, to decide if they would like to participate in these events. Some ancillary events include: 1) Trading Day. Trading Day is a day when students assemble to sell their products. Trading Day resembles a real-world trade show. 2) Stock Market Competition. This is a typical stock market game with the added feature of allowing students to purchase stocks of VE's. 3) IPO Conference. The IPO Conference allows VE students to bring their firm's "public". This year's iteration of the IPO Conference had VE's participating live, via videoconference, from Austria, New York, and California.

Finally, what just might be the most unique part of Virtual Enterprise is that it is free. VE is a modified, open source model that costs nothing for anyone to participate. All of the components of VE are free to anyone willing to adopt the VE methodology. Access to the MarketMaker, as well as teaching tools are provided free of charge. IVE does not apply or levy any fees, dues or other charges for participation. IVE encourages

participation with multiple service providers/networks in the virtual world. IVE believes in inclusion; rather than excluding those eager to work collaboratively.

### **Principal Students**

At the college level, Virtual Enterprise originally started as a capstone course for students in the Tourism and Hospitality Department at Kingsborough College, a college of the City University of New York. Virtual Enterprise was offered as a simulation for students who wanted to own and operate their own tourism and hospitality businesses. Since then, VE has grown within CUNY.

VE is now offered at most of the 16 CUNY campuses, in a variety of platforms. At Baruch College, VE is offered to entrepreneurship students at the graduate and undergraduate levels. At other four-year institutions of CUNY, VE is offered as a capstone course for business majors, as well as other career programs.

VE has also been used as a university-wide elective for students at all 16 CUNY campuses for social entrepreneurship and entrepreneurial leadership causes. CUNY's Leadership program allows students to create their own virtual enterprise and provides a summer stipend to students to use as an incubator to bring their businesses to the marketplace. In the social entrepreneurship and entrepreneurial leadership model of virtual enterprise, students choose a societal problem and create an entrepreneurial solution. It is important for educators to realize that the VE methodology can be applied to a variety of academic and career-oriented curricula. The VE method of instruction is only limited to the creative educator's wildest ambitions.

The City University of New York has recently announced that a Virtual Enterprise course will be required of all students in their newly created online BS in Business. CUNY is making VE a required capstone course for all students enrolled in this new program. IVE is looking forward to administering this course as it will be the first time that a VE course will be conducted completely online.

Finally, VE has also been used as an intervention for at-risk students, as well as English as a Second Language, students. Early research has indicated that VE helps at-risk students focus better because they see the rewards of learning entrepreneurial skills and traits. ESL students like VE because it gives them the confidence to learn how businesses operate in the United States, and it gives them the confidence to start their own businesses. (More on this topic below)

### **Conducted Research on Virtual Enterprise Methodology**

Virtual Enterprise methodology has been the focus of outside analysis from independent organizations as well as the focus of research on individual student cohorts. The Center for Advanced Study in Education (CASE) conducted an independent evaluation of Virtual Enterprise courses in 2001. The results indicated an increase in specific student

outcomes in the areas of: communication, motivation, critical thinking and problem solving, global awareness, inter and intrapersonal skills, business knowledge and, of course, entrepreneurial skills.

Research on the effects of Virtual Enterprise on specific student cohorts has also been conducted. One research study was conducted on the effects of Virtual Enterprise on At-Risk Students. Results from this 2002 study indicated that students: developed skills and competencies in entrepreneurship, spent more than double the required contact time because they were engaged in VE activities, did not see the class as a game or simulation and took it very seriously, improved their communication, technology, English and math skills.

Another research study was conducted on the effects of Virtual Enterprise on recent immigrants. The results were published as part of a paper presented at USASBE's Conference in June 2005. The paper was entitled: *Virtual Enterprise: Engaging Recent Immigrants and Minorities in Entrepreneurship Education*. The results from this research study indicated that Virtual Enterprise courses helped immigrant students improve their CUNY entrance exam scores more than immigrant students that did not take a Virtual Enterprise course. Furthermore, this student cohort felt and saw improvement in a variety of skills including: business operations, teamwork, creativity, technology and verbal communication.

Finally, an unpublished doctoral dissertation by Dr. Richard Graziano focused on students' perspectives on the Virtual Enterprise simulation as an experiential, active learning strategy for business and career education. Students related that they made great or very great progress in a number of areas including: global business, technology skills, self-confidence, critical thinking, problem solving, written and oral communication and teamwork.

### **Sources of Funding**

Funding for the IVE program comes from a variety of businesses and organizations. First and foremost we have limited monetary support from CUNY. IVE maintains an office in CUNY's Manhattan location. Mainly, Virtual Enterprise courses have been woven into the curriculum at most of CUNY's 16 campuses where they appear as electives or required courses in certain majors.

In addition to the support provided by CUNY, we have a variety of funding from the private sector. Private sector partners provide either monetary awards or in-kind benefits of some sort. Some of our private sector partners include: the Kauffman Foundation, the Coleman Foundation, United States Department of Labor (USDOL), National Science Foundation (NSF), Fund for the Improvement of Post-Secondary Education (FIPSE), American Express, The Citibank Foundation, The Federal Reserve Bank of New York, CIT, Carriage House, City Guide Magazine, and Washington Computers.

THURSDAY, JANUARY 10, 2008

# City University of New York

## Award Nomination: Innovative Entrepreneurship Education Courses

### VIRTUAL ENTERPRISE EXECUTIVE SUMMARY

SUBMITTED BY:  
Dr. Anthony Borgese

#### For More Information

Contact names:  
Dr. Stuart Schulman,  
Executive Director

Dr. Anthony Borgese, IVE Fellow

Telephone:  
718-368-5143

Fax:  
718-368-4880

Web site:  
www.ive.cuny.edu

#### Purpose and Mission of the Institute for Virtual Enterprise:

City University of New York (CUNY) Trustees approved the proposal advanced by Kingsborough Community College to create a university-wide Institute for Virtual Enterprise (IVE) as a special CUNY initiative in May 2002. IVE is structured to meet the rapidly evolving needs of today's students who require active learning, including simulations and problem-based learning in a student-centered, student-led learning community.

IVE's mission is to:

- 1) Enhance student engagement and success by building a strong foundation in Entrepreneurship, Financial Literacy and Leadership. IVE initiatives are characterized by being student-centered and student-led, faculty facilitated instruction, providing opportunities for applying academic learning in new curricula constructs, technology driven hybrid models, and close interaction with private sector and community groups.
- 2) Support IVE program components and faculty development that transforms teaching, sup-

port networks, and program dissemination strategies have been developed and deployed.

#### Description of Virtual Enterprise

The Virtual Enterprise (VE) course is an experiential course in entrepreneurship, wherein students create, own, and operate their own virtual businesses in a global VE economy. It is NOT a computer program, and there is no software to purchase. The Virtual Enterprise course is a behavioral based, experiential simulation.

A typical Virtual Enterprise course starts with the instructor outlining the goals, objectives, and learning outcomes for the particular virtual enterprise course. This depends on the composition of the students in that particular VE course as VE's have been administered to entrepreneurship students, students in career programs and liberal arts majors as well. Past VE courses have resulted in virtual, as well as real, businesses being created. It is usually up to the students and the instructor to choose which type of VE they wish to participate in. Students create VE firms by evaluating the VE global marketplace and then deciding on an industry, a business name, and a logo.

Once the type of business has been decided, students create a business plan, estimate start-up costs, and make an oral presentation to investors from the business community for virtual start-up capital. IVE provides virtual seed money at competitive interest rates, and provides all VE's with a corporate bank account. Students then pay bills, make inventory purchases and start to operate their virtual businesses. They learn the financial aspects of running a business by doing it, as opposed to just learning the theories behind financial management.

In addition to learning the financial aspects of running a business, students also learn the sales, budgeting, negotiation, human resources, and technology skills of running a business. For example, marketing plans have to be learned, created and implemented as well as other financial management skills. This includes creating advertising, estimating sales goals, as well as uploading products to the IVE Shopping Mall in order to sell or trade products and learn about e-commerce.

Educators have long quarreled about the best way to teach students. VE Instructors believe that the most useful way to teach a student entrepreneurship is through the use of applied education. If we can all agree as entrepreneurship educators that applied learning is the best method, then why are lecture methods still pervasive? IVE believes that lecture methods are still being utilized because entrepreneurship instructors do not have models that can balance engagement with content coverage, and VE does just that. Virtual Enterprise is one of the best ways for students to apply their business education, in a safe environment, before going into actual business practice. No other school or program offers that for all of its students. Rather a few select students who win business plan competitions and get limited seed money to start actual businesses. This is just not financially feasible to engage all students.

#### Unique Aspects of Virtual Enterprise

There are a variety of unique aspects of Virtual Enterprise. First, VE is a unique method of teaching. Instead of merely attending classroom lectures on various subjects like marketing, finance and business, and students learn by doing by creating, advertising, marketing and business plans. One might argue that that is nothing more than any other experiential course. However, what makes VE really unique is the vastness of its network, which enables students to apply and hone the entrepreneurial skills they learn through the program.

Virtual Enterprise is not just for CUNY students. Through the efforts of IVE Fellows, VE has been adopted by numerous colleges throughout the United States, and abroad. The following colleges have adopted Virtual Enterprise courses in some application: Shoreline Community College, Edmonds Community College, Howard Community College, Hayward Community College, Frostburg State, Rhodes State, Corporate College, Bellevue Community College, and Montgomery College.



VE Making Sales

Additionally, IVE has the following international partners: Randers Business College, University of Malta, University of Linz, University of Graz, the State Department of Kyrgyzstan, and other, numerous European Colleges. All of these colleges and universities provide a truly global business environment for VE students.

Another unique aspect of Virtual Enterprise is the MarketMaker component. (www.ivefinancial.com) The MarketMaker is the educational, electronic, financial teaching tools that make the VE truly unique. The MarketMaker consists of: a virtual bank, a virtual stock market, virtual credit cards and a virtual e-commerce shopping mall. Each tool provides students with a valuable financial management skill.

The virtual bank simulates a real banking environment. When a new VE starts, students are given a virtual bank account, along with virtual seed money. By doing this, students learn valuable cash flow management skills, lines of credit, as well as payroll and other banking aspects of running a business. The virtual stock market can be used for anyone from graduate students learning the intricacies of an initial public offering, to undergraduates competing in a stock market/investing simulation.

The virtual credit card allows students to learn the skills of using credit properly. Virtual business credit cards are offered to virtual enterprise firms to make purchases and pay bills. Finally, the IVE Shopping Mall allows students to trade their virtual products in an electronic marketplace. After receiving the initial seed money to start a new VE, students are given access to upload their products to the IVE Shopping Mall. The IVE Shopping Mall is an electronic commerce marketplace for all virtual enterprise firms.

Ancillary activities and events also make Virtual Enterprise very unique. Many entrepreneurship programs have some sort of business plan competition, as does IVE. However, IVE offers other ancillary activities as part of a Virtual Enterprise course. It is up to the instructor, or the student, to decide if they would like to participate in these events. Some ancillary events include: 1) Trading Day. Trading Day is a day when students assemble to sell their products. Trading Day resembles a real-world trade show. 2) Stock Market Competition. This is a typical stock market game with the added feature of allowing students to purchase stocks of VE's. 3) IPO Conference. The IPO Conference allows VE students to bring their firm's "public". This year's iteration of the IPO Conference had VE's participating live, via videoconference, from Austria, New York, and California.

Finally, what just might be the most unique part of Virtual Enterprise is that it is free. VE is a modified, open source model that costs nothing for anyone to participate. All of the components of VE are free to anyone willing to adopt the VE methodology. Access to the MarketMaker, as well as teaching tools are provided free of charge. IVE does not apply or levy any fees, dues or other charges for participation. IVE encourages participation with multiple service providers/networks in the virtual world. IVE believes in inclusion; rather than excluding those eager to work collaboratively.

#### Principal Students

At the college level, Virtual Enterprise originally started as a capstone course for students in the Tourism and Hospitality Department at Kingsborough College, a college of the City University of New York. Virtual Enterprise was offered as a simulation for students who wanted to own and operate their own tourism and hospitality businesses. Since then, VE has grown within CUNY.

VE is now offered at most of the 16 CUNY campuses, in a variety of platforms. At Baruch College, VE is offered to entrepreneurship students at the graduate and under-

graduate levels. At other four-year institutions of CUNY, VE is offered as a capstone course for business majors, as well as other career programs.

VE has also been used as a university-wide elective for students at all 16 CUNY campuses for social entrepreneurship and entrepreneurial leadership courses. CUNY's Leadership program allows students to create their own virtual enterprise and provides a summer stipend to students to use as an incubator to bring their businesses to the marketplace. In the social entrepreneurship and entrepreneurial leadership model of virtual enterprise, students choose a societal problem and create an entrepreneurial solution. It is important for educators to realize that the VE methodology can be applied to a variety of academic and career-oriented curricula. The VE method of instruction is only limited to the creative educator's wildest ambitions.

The City University of New York has recently announced that a Virtual Enterprise course will be required of all students in their newly created online BS in Business. CUNY is making VE a required capstone course for all students enrolled in this new program. IVE is looking forward to administering this course as it will be the first time that a VE course will be conducted completely online.

Finally, VE has also been used as an intervention for at-risk students, as well as English as a Second Language, students. Early research has indicated that VE helps at-risk students focus better because they see the rewards of learning entrepreneurial skills and traits. ESL students like VE because it gives them the confidence to learn how businesses operate in the United States, and it gives them the confidence to start their own businesses. (More on this topic below)

#### Conducted Research on Virtual Enterprise Methodology

Virtual Enterprise methodology has been the focus of outside analysis from independent organizations as well as the focus of research on individual student cohorts. The Center for Advanced Study in Education (CASE) conducted an independent evaluation of Virtual Enterprise courses in 2001. The results indicated an increase in specific student outcomes in the areas of: communication, motivation, critical thinking and problem solving, global awareness, inter and intrapersonal skills, business knowledge and, of course, entrepreneurial skills.

Research on the effects of Virtual Enterprise on specific student cohorts has also been conducted. One research study was conducted on the effects of Virtual Enterprise on At-Risk Students. Results from this 2002 study indicated that students: developed skills and competencies in entrepreneurship, spent more than double the required contact time because they were engaged in VE activities, did not see the class as a game or simulation and took it very seriously, improved their communication, technology, English and math skills.

Another research study was conducted on the effects of Virtual Enterprise on recent immigrants. The results were published as part of a paper presented at USASBE's Conference in June 2005. The paper was entitled: *Virtual Enterprise: Engaging Recent Immigrants and Minorities in Entrepreneurship Education*. The results from this research study indicated that Virtual Enterprise courses helped immigrant students improve their CUNY entrance exam scores more than immigrant students that did not take a Virtual Enterprise course. Furthermore, this student cohort felt and saw improvement in a variety of skills including: business operations, teamwork, creativity, technology and verbal communication.

Finally, an unpublished doctoral dissertation by Dr. Richard

### VirtualEnterprise USASBE 2008 Finalist for Innovative Entrepreneurship Education Course

Presented by: Anthony Borgese  
San Antonio, 2008

#### Virtual Enterprise

- Virtual Enterprise is an interdisciplinary, technology driven, experiential, simulation program in which students develop and manage global entrepreneurial enterprises in a virtual environment
- Students trade their products and services via the MarketMaker software through a worldwide network of 4,000 firms in more than 40 countries

#### Uniqueness

- Experiential course that goes beyond the creation of a business plan
- MarketMaker software that includes a corporate bank account, corporate credit card, E-commerce shopping mall, and stock market
- Appeals to non-business majors
- Not every program has funding
- Ancillary events

#### Quality and Effectiveness

- Applied to a variety of student cohorts: undergrad, grad, honors, leadership, at-risk, ESL, and workforce development
- Independent evaluation of VE noted student outcomes of communication, motivation, critical thinking and problem solving, global awareness, inter and intrapersonal skills, business knowledge and, of course, entrepreneurial skills

#### Completeness and Comprehensiveness

- Students may take one, or two semesters
- Allows students to start their businesses with a safety net
- Goes beyond the business plan and into actual operation of the business

#### Sustainability

- IVE created as special initiative by CUNY in 2002
- Continuous adoption of methodology by various CUNY and non-CUNY colleges and universities
- Limited private sector partners
- Kauffman and Coleman grants
- NSF and DOL grants

#### Transferability

- Accepted by various colleges and universities: Frostburg State, Rhodes State, Hayward C.C., Shoreline, C.C., Corporate College, etc.
- International collaborations at University of Linz, Randers Business College, University of Malta
- Used by various non-business majors in entrepreneurship across the curriculum initiatives

Graziano focused on students' perspectives on the Virtual Enterprise simulation as an experiential, active learning strategy for business and career education. Students related that they made great or very great progress in a number of areas including: global business, technology skills, self-confidence, critical thinking, problem solving, written and oral communication and teamwork.

#### Sources of Funding

Funding for the IVE program comes from a variety of businesses and organizations. First and foremost we have limited monetary support from CUNY. IVE maintains an office in CUNY's Manhattan location. Mainly, Virtual Enterprise

courses have been woven into the curriculum at most of CUNY's 16 campuses where they appear as electives or required courses in certain majors.

In addition to the support provided by CUNY, we have a variety of funding from the private sector. Private sector partners provide either monetary awards or in-kind benefits of some sort. Some of our private sector partners include: the Kauffman Foundation, the Coleman Foundation, United States Department of Labor (USDOL), National Science Foundation (NSF), Fund for the Improvement of Post-Secondary Education (FIPSE), American Express, The Citibank Foundation, The Federal Reserve Bank of New York, CIT, Carriage House, City Guide Magazine, and Washington Computers.

