

## **A NEW BACHELORS DEGREE: Virtual Business**

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### **ABSTRACT**

*The days of doing business solely in a brick and mortar environment are gone. They have been enhanced with the virtual environment. This change requires a change in the skill set of students graduating with a bachelor's degree in business. The business students of tomorrow will need to function in a virtual environment necessitating the need for a tool kit that includes how to function as a virtual employee, manage a virtual employee or team, and communicate with virtual customers. This research discusses the creation of a new degree, a Bachelor of Science – Virtual Business (BSVB). The description of the BSVB graduates, assessment criteria and learner outcomes, and the proposed curriculum are presented.*

**Keywords:** Virtual Business, virtual teams, collaboration

### **INTRODUCTION**

Until the mid 80's conducting business virtually meant calling someone on the phone or possibly sending an e-mail. Today some businesses are entirely virtual, conducting business through the use of integrated computer and communication technologies. Virtual businesses compete with brick and mortar businesses for customers. Case in point: Amazon was one of the first successful virtual businesses competing directly against Barnes and Noble, a brick and mortar business.

Barnett [1] identifies four different versions of the virtual business as telecommuting, hot-desk, hotelling, and virtual teams. At the heart of each of these versions is the use of integrated computer and communications technologies to link hundreds, thousands, even tens of thousands of people together [2]. The use of these new technologies presents new challenges to management in areas of role definition, clarification of boundaries, accountability and measurement of results, and impact on teams [3].

In a rural, sparsely populated state, such as North Dakota, the idea of virtual business is an exciting opportunity. With this new opportunity comes the challenge of creating a new business degree that will prepare the students to manage a virtual business. The questions that need addressing include what types of businesses would benefit from a virtual business degree, what types of courses must be included in the degree, what types of technology would need to be included, and what learning outcomes would be required of students seeking to become managers of a virtual business.

In an attempt to answer these questions the researchers invited a panel of experts from virtual businesses to participate in a Delphi study. A virtual collaboration tool was used to communicate with each panel member, collect their responses to each question, and post the consolidated information. The process continued until a consensus was reached for various questions. Once final consensus was reached, learning outcomes were developed as the basis to determine courses appropriate for a degree in virtual business.

## **METHODOLOGY AND RESEARCH QUESTIONS**

The methodology used in this research was a Delphi study. Participants were chosen through personal contacts of the researchers and recommendations of participants. The participants were individuals currently working in some type of virtual business environment. Participants were located throughout North Dakota and the United States, and one individual was located in Singapore and China. The types of virtual businesses represented included independent consultants, employees involved in telecommuting, call-center managers, and manager of virtual contract employees.

A computer mediated collaboration tool, Microsoft Team Services, was used to collect the responses from the participants. The participants were able to respond to the original question as well as the responses from the other participants. Once all participants had responded to the original questions the researchers compiled the results and posted the compiled result back to the web page. Each participant was asked to respond to the compiled results and provide further thoughts or agree with what was presented. The process continued until all participants agreed on the compiled results.

The researchers recognize that choosing business professionals currently working in a virtual environment and those based on personal contacts is a delimitation of the study. We also recognize that the extent and quality of the responses may be a limitation of the study.

### **Research Questions and Responses**

#### **Question One: How would you define a virtual business?**

The panel of experts agreed that a virtual business integrates the services of many organizations by replacing proximity with communication technology. Technology and people drive a successful business model independent of geography.

#### **Question Two: How would you define a virtual organization?**

The panel of experts agreed that a virtual organization is a team of people not limited by physical location who collaborate through technology to achieve a common goal.

#### **Question Three: How would you define a virtual employee?**

The panel of experts agreed that a virtual employee is someone who may work for a variety of organizations but may not be an employee of any. The employee works remote to his/her manager, team members, and main office; communicating by email, phone, teleconferencing, or electronic collaboration technologies. To be successful the virtual employee must be a self-organized, self-motivated, and semi-autonomous free agent.

**Question Four: What type of business will this degree benefit?**

The panel of experts agreed that students who graduate with a BSVB degree would seek employment as managers of virtual teams, independent consultants, managers of businesses whose customers are geographically separated from the home office, and managers of employees whose job can be completed regardless of location.

**Question Five: What does a graduate of the Virtual Business degree look like?**

The panel of experts agreed that a graduate with a degree in Virtual Business is someone who may work for a variety of organizations but may not be an employee of any; may work remote to his/her manager, team members, and main office; communicates by email, phone, teleconferencing, or electronic collaboration technologies; is a self-organized, self-motivated, and a semi-autonomous free agent.

**Question Six: What are the assessment criteria and learning outcomes that measure the success of the program?**

Extended discussion produced the following criteria and learning outcomes for the BSVB degree.

**Criterion one:** Demonstrate knowledge of and skills in managing virtual employees.

1. Train and mentor employees.
2. Manage virtual teams.
3. Capture intellectual capital for building a knowledge management system.

**Criterion two:** Uses technology in virtual business.

1. Choose appropriate technology to solve a virtual business problem.
2. Use technology for collaboration.
3. Achieve MOS certification at the Expert level in Excel, Access, and Outlook.

**Criterion Three:** Apply project management concepts.

1. Describe components of project management.
2. Use project management strategies for virtual business development.
3. Achieve MOS certification at the Expert in MS Project.

**Criterion Four:** Demonstrate an understanding of concepts of human computer interaction.

1. Explain socio-technical concepts of human computer interaction.
2. Understand and apply human computer interaction concepts in designing a virtual environment.

**Criterion Five:** Plan, develop, and implement a virtual business.

1. Develop strategies for a virtual business.
2. Develop, implement, and assess a knowledge management system.
3. Understand and apply concepts of E-Business.

**Question Seven: What should the curriculum for this degree look like?**

In addition to completing course in the major students earning four-year business degrees from the MSUs College of Business (COB) must complete general education requirements, COB core, and required support courses. Beginning Fall 2004 students in Business Education, MIS, and VB are also required to earn MOS certification in specific Microsoft software applications. Table 1 represents the program of study for the BSVB.

**Table 1 BSVB 2004**

<b>BACHELOR OF SCIENCE IN VIRTUAL BUSINESS</b>			
<b>College of Business Core</b>		<b>Required Major Courses</b>	
Acct 200 Elements of Accounting I	3 SH	BIT 235 Introduction to Web Design	3 SH
Acct 201 Elements of Accounting II	3 SH	BIT 312 Database Theory and Application	3 SH
Acct 300 Legal Environment of Business	3 SH	*BIT 341 Human-Computer Interaction	3 SH
BADM 301 Fundamentals of Management	3 SH	BIT 342 Advanced Web Design	3 SH
BADM 321 Marketing	3 SH	BIT 356 Business Data Communications	3 SH
BADM 353 Corporate Finance	3 SH	BIT 358 Networking for Managers	3 SH
BIT 247 Spreadsheet Applications	3 SH	BIT 370 E-Commerce Technology	3 SH
BIT 318 Business Communication	3 SH	*BIT 450 Knowledge Management	3 SH
BIT 320 Management Information Systems	3 SH	*BIT 455 Virtual Teams	3 SH
<b>Total</b>	<b>27SH</b>	*BIT 457 Virtual Business Technology	3 SH
		BIT 460 Current and Emerging Issues	3 SH
		*BIT 471 Strategies for managing a virtual business	6 SH
		<b>Total</b>	<b>39 SH</b>
<b>Required Support Courses</b>		<b>General Education Requirements</b>	
Econ 201 Principles of Microeconomics	3 SH		<b>38 SH</b>
Econ 202 Principles of Macroeconomics	3 SH	<b>Total Semester Hours</b>	<b>129 SH</b>
Math 240 Statistics	4 SH	<b>Note:</b>	
Math 146 Applied Calculus	3 SH	1. Math 146, Econ 201 and 202 will count as general education credits allowing for six elective credits.	
Psy 111 Introduction to Psychology	3 SH	2. MOS certification at the expert level in Outlook, Excel, Access, and Project.	
BADM 303 Human Resource Management	3 SH		
BADM 401 Entrepreneurship/ Small Business Management	3 SH		
BADM 409 International Business	3 SH		
<b>Total</b>	<b>25 SH</b>		

The panel of experts determined the following classes needed to be added to the current departmental offerings to customize the direction of the BSVB. The descriptions for these five new courses are

**BIT 341 Human-Computer Interaction (3 SH)**

Study of physical, psychological, and theoretical aspects of human factors and the computer interface. Emphasis placed on human factors, such as levels of knowledge, work environment, productivity, and satisfaction, as they interact with computer software and hardware design, implementation, and evaluation. Prerequisites: Psy 111, BIT 235.

**BIT 455 Virtual Teams (3 SH)**

Explores team creation, social/environmental aspects, member roles as well as virtual team management. Includes oral and written communication skills for working in the virtual collaborative environment. Prerequisites: BIT 318

**BIT 457 Virtual Business Technology (3 SH)**

Use of collaborative tools (application software, email, teleconferencing, Intranet, voice over IP), wireless technology, handheld devices, etc. Prerequisites: BIT 455

**BIT 460 Knowledge Management (3 SH)**

Development of knowledge management systems by creating, obtaining, importing, delivering, and helping the right people apply the right knowledge at the right time. Prerequisite: BIT 457

**BIT 471 Strategies for managing a virtual business (6 SH)**

Focuses on strategic planning and management of a virtual business. Content includes resource management, project management, application of technology, and employee training and mentoring. Course is a capstone experience emphasizing the application of techniques from all previous courses and includes a semester-long internship. Prerequisites: Certifications complete (Excel, Access, Outlook, and MS Project), last semester of study.

## CONCLUSION

The creation of the Bachelor of Science in Virtual Business degree will meet requests from area, state, regional, and even national employers for managers and professionals with specific expertise in mediated communication environments. In addition to enhancing the economic development efforts of the immediate area by providing highly qualified employees for new and relocating businesses, this program has the potential for a worldwide audience since a similar academic program does not exist. The inclusion of online delivery provides degree accessibility on a state, regional, national, and international level.

## REFERENCES

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