



EDUVENTURES

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Undergraduate Program Development Opportunities in Sustainable Business

Data Type	Key Sources
Trends in Sustainable Business	<ul style="list-style-type: none"> Interviews With Relevant Professional Associations
Preferences for a Bachelor's Degree in Sustainable Business	<ul style="list-style-type: none"> Bureau of Labor Statistics Wisconsin Workforce and Labor Market Department

Key Questions

What is the market for a bachelor's degree that combines both the best business and green environmental practices within a for-profit framework?

Who are the key target audiences for the proposed program?

How should the inquiring member structure and deliver a bachelor's degree in sustainable business with a *green* emphasis?

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Inquiry Overview

A CPE member institution would like to assess the feasibility of offering a bachelor's degree in sustainable business with a *green* concentration or focus. The proposed program would be a bachelor's completion program targeted to working adult students. The emphasis of the degree would be split between business and green environmental issues. Specifically, the university is interested in understanding the applicability of this degree to various industries, potential target audiences, preferred curriculum and emphasis areas, and types of *green* skills and training in demand. In addition, the university seeks to understand the extent of employer tuition support for the proposed program, as well as delivery preferences.

Methodology

To assess trends in sustainable business and preferences for the proposed program, CPE staff engaged in conversations with relevant professionals. CPE staff focused conversations on experts within relevant professional associations due to the inquiring member's interest in a national perspective. CPE staff also mined the Bureau of Labor Statistics and Wisconsin's Workforce and Labor Market department to identify industry and occupational trends related to sustainable business.

Custom Research Reports – *In-depth analysis of issues of concern to individual members.* The CPE program maintains dedicated staff to support members' needs for detailed, quick-turnaround research. Requests may be prompted by issues raised in the CPE program's Collaborative Research investigations, may seek to leverage the collective experience of the CPE membership, or may take the form of small-scale primary research investigations or reviews of secondary literature. Requests are fulfilled on a first-come basis and generally take 10 to 12 weeks to complete subsequent to the receipt of an approved proposal. CPE staff works to deliver accurate, reliable data and information in all cases; however, we cannot guarantee the accuracy of data and information from all sources used.

Key steps in this investigation included:

Step 1	Step 2	Step 3	Step 4	Step 5
Define scope and objectives of inquiry, and formulate hypothesis	Identify secondary and/or primary sources to be investigated	Collect data and test research hypothesis	Summarize key findings with reference to supporting evidence	Recommend specific actions and areas for further research, if needed
<ul style="list-style-type: none"> • Interview CPE member regarding objectives for inquiry • Formulate research hypothesis: There is opportunity for the inquiring member to create a sustainable business bachelor's degree program 	<ul style="list-style-type: none"> • Bureau of Labor Statistics • Wisconsin's Workforce and Labor Market Department • Relevant Professionals and Industry Experts Within Sustainability-Related Fields 	<ul style="list-style-type: none"> • Collect Labor Market Data • Conduct Conversations • Adjust hypothesis based on analysis of data, as necessary 	<ul style="list-style-type: none"> • Demand for sustainable business programming is likely to continue • Low levels of competition exist at the undergraduate level • A practical and interdisciplinary approach to curriculum is valuable 	<ul style="list-style-type: none"> • Conduct an internal assessment to identify potential courses/ infrastructure in which to leverage • Strive to communicate market opportunity systemwide • Further primary research is recommended

Findings

The main goal of this research investigation is for the inquiring member institution to better understand the opportunity to launch a bachelor's degree program in sustainable business with a *green* concentration or focus.

This report is structured as follows:

- The first section details trends in the sustainability area and key national drivers of demand for sustainable business educational programming
- The second section is an analysis of regional demand for a sustainable business undergraduate degree program
- Section three provides an analysis of the value of, and preferences for, a bachelor's degree in sustainable business as identified by experts in sustainable business-related fields
- Lastly, section four identifies existing providers of sustainable business-related undergraduate degree programming

To aid in accomplishing the main goal of this research investigation, CPE staff engaged in conversations with relevant professionals in the sustainability field. CPE staff also conducted a labor market analysis to provide insight into national and regional trends applicable to an undergraduate program in sustainable business and potential target audiences.

CPE staff obtained feedback from representatives at eight organizations:

- Association for the Advancement of Sustainability in Higher Education
- Higher Education Associations Sustainability Consortium
- Network for Business Education and Sustainability
- Sustainable Business Institute
- University Leaders for a Sustainable Future
- U.S. Partnership for Education for Sustainable Development
- Wisconsin Green Building Alliance
- We Energies, Milwaukee, WI
- Wisconsin Environmental Initiative*
- Wisconsin Partners for Sustainability*

* Full interview is pending due to scheduling conflicts. CPE staff will update the inquiring member institution with any additional feedback it receives from other organizations after the delivery of this report.

Key findings of this research investigation include:

National Drivers of Demand for Sustainable Business Programming

- Sustainable businesses operate across a wide range of business sectors and industry clusters – *educational opportunities for a sustainable business program are not restricted to any one particular industry sector, yet interest in sustainable business education spans a multitude of industries*
- The U.S. Partnership for Education for Sustainable Development estimates high growth rates exist in the creation of sustainability-related educational programs nationally; colleges and universities are increasingly funneling investments into new degree programs, building campus sustainability centers, and finding ways to build the sustainable theme into existing programs – *sustainability and green topics are areas of increasing interest in higher education; however, the inquiring member institution should strive to be at the forefront of this trend*
- Nationally, professional and business services, state and local government, and construction represent the most attractive industries to target sustainable business given their high growth projections through 2016 – *these high-growth industries represent potential audiences in which to target the proposed program on a national level*

Regional Demand for Sustainable Business Programming

- Within Wisconsin, professional and business services and trade, transportation, and utilities represent the most attractive industries to target sustainable business, given their high growth projections through 2014 – *these high-growth industries represent potential audiences in which to target the proposed program on a regional level*
- General and operations managers, construction managers, first-line supervisors/managers of construction trade workers, and production and operating workers are projected to experience the largest numeric growth of sustainable business-related occupations in Wisconsin – *these occupations represent attractive potential target audiences for sustainable business programs, given that they typically require a bachelor's degree and have high growth projections through 2014*

- Management-related occupations applicable to a sustainable business undergraduate degree program demand on average an annual salary of nearly \$65,000 – *earnings prospects for graduates of sustainable business programs are relatively high; the inquiring member should message this opportunity to prospective students*

The Value of an Undergraduate Sustainable Business Program

- Overall, the proposed bachelor’s degree in sustainable business was extremely well-received by interviewed experts, and many noted the opportunity for the inquiring member institution to be at the forefront of this market – *expert feedback supports the inquiring member’s program development opportunity, and since low levels of competition exist, it appears to be an opportune time for the inquiring member to enter the market*
- While expert feedback and secondary research suggest that potential audiences vary widely due to sustainability being of interest to many industry sectors, key prospective target audiences that emerged in this research investigation include:
 - Entry- to mid-level management professionals
 - Professionals within environmental health and safety positions
 - Individuals aspiring to positions as directors of sustainability or sustainability coordinators
 - Professionals within the construction, business services, manufacturing, and utilities sectors
 - Traditional undergraduate students
- Experts noted the importance of including a core business curriculum, but also emphasized an interdisciplinary approach to the sustainable business core requirements – *the inquiring member institution should conduct an internal assessment of their current offerings relating to sustainability and environmental issues to identify areas which to leverage; the inquiring member institution should also strive to collaborate with various academic colleges and departments to provide an interdisciplinary approach to curriculum design*
- Additional key content areas identified by experts to consider including within a sustainable business bachelor’s degree program include corporate social responsibility, change agent skills, full cost accounting and lifecycle analysis of going *green*, and *triple bottom line* principles
- Potential concentration or emphasis areas that the inquiring member should consider for a sustainable business bachelor’s degree program include:
 - Green marketing
 - Environmental management
 - Public policy
- Hybrid delivery is a common format for existing graduate programs in sustainable business; however, one expert noted that hybrid delivery would also be effective in an undergraduate setting

Existing Competition of Sustainable Business Undergraduate Programming

- Sustainable business topics and courses are increasingly being incorporated into M.B.A. programs nationally; however, the incorporation of sustainable business appears to be occurring at a much smaller rate at the undergraduate level – *while, this trend suggests that the inquiring member’s proposed program would be at the forefront of the market, it*

- may also indicate low levels of demand at the undergraduate level*
- Low levels of competition exist for undergraduate programs in sustainable business nationally – *this demonstrates further support for the development of a bachelor’s degree in sustainable business targeted to working adult students*

Drivers of Demand for Sustainable Business Programming

The evolving *green* movement and interest in sustainability appear to be shaping education and professional training, driving public opinion, and impacting the ways in which industries operate across a wide array of sectors: from business administration and construction to architecture, transportation, environmental resources, engineering, manufacturing, utilities, and production.

More specifically, sustainable businesses operate across all business sectors: energy efficiency and renewable energy generation, water and wastewater treatment, resource-efficient industrial processes, advanced materials, transportation, and agriculture. It creates products and services that compete on price and performance while significantly reducing humankind’s impact on the environment (sustainablebusiness.com, January 2008).

Key Trends in the Sustainable Business Market

- The entire energy infrastructure of the U.S. is moving toward renewable energy in the next 20 years, and there are hundreds of millions of dollars to be raised to support studies and research focused on sustainability at colleges and universities
- Many business and technology experts now see the enhancement of collaboration among industry, government, and academia as a key strategy to address the issues caused by a new business environment
- Colleges are funneling money into new degree programs, building campus sustainability centers, and finding ways to build the sustainable theme into existing programs
- According to the President of the U.S. Partnership for Education for Sustainable Development, sustainability-related educational programs are increasingly being created
- High demand exists for M.B.A. programs related to sustainable topics (greenbiz.com)
- Research suggests that programs and policies in sustainability can give an institution an instant edge, which can be a competitive advantage in student recruiting
- Business-related programs focusing on sustainability are becoming more mainstream
- Consumer attention to corporations that market themselves as green-friendly is growing

Furthermore, according to the President of the U.S. Partnership for Education for Sustainable Development, the following key drivers are also stimulating interest and demand for sustainable business programming:

- Customer demand for social and environmental responsibility from business and corporations
- Business recognition that if sustainability issues are not addressed, an increased cost will result
- Sustainability-related trends occurring in all sectors and industries of society driving demand for educational programming is likely to derive from numerous areas

Clearly, sustainability and sustainable business issues are increasingly becoming ingrained in various populations, including the public, academia, business, and government. Interest in these topics is likely to continue as environmental and sustainability issues continue to be at the

forefront of public policy. Thus, related educational programming is likely to continue to meet demand.

National Industry Trends Influencing Demand for Sustainable Business Programming

CPE staff mined the Bureau of Labor Statistics (BLS) to identify the applicability of a bachelor’s degree in sustainable business to various industry clusters nationally. It is important to note that feedback from experts in sustainable business-related fields suggested that this discipline can be applicable to a wide variety of industries, as well as organizations and businesses.

The founder of the Sustainable Business Institute echoed this sentiment.

“The industries [most applicable to sustainable business] are quite eclectic. There is a wide range of organizations that are looking at issues of sustainability. It seems there is interest in any industry”

– Chairman/Founder, Sustainable Business Institute

With regard to industry trends nationally, as of 2006, employment within services-producing industries was the highest. Within this industry segment, state and local government and retail trade are the industries with the largest level of employment. Within goods-producing industry segments, manufacturing had the largest employment level nationally in 2006. As expert feedback suggested, interest in sustainable business exists within numerous industries, thus based on numeric growth projections through 2016, construction, professional and business services, and state and local government are the industries representing the most attractive target market for sustainable business programming. Figure 1 displays trends and projections for sustainable business-related industries nationally.

Figure 1. National Trends in Industry Segments Applicable to Sustainable Business Programming*

Industry	2006 Employment	2016 Projected Employment	Numeric Growth		Average Annual Percentage	
			1996 to 2006	2006 to 2016	1996 to 2006	2006 to 2016
Goods-producing, excluding agriculture	23,328.50	22,504.90	21,772.60	-823.6	13.1	-0.4
Construction	5,535.50	7,688.90	8,469.60	2,153.40	5.1	3.3
Mining	556.4	618.7	608.5	62.3	0.4	1.1
Manufacturing	17,236.60	14,197.30	12,694.50	-3,039.30	7.6	-1.9
Services-providing	97,042.90	114,407.30	130,189.70	17,364.40	78.3	1.7
Professional and business services	13,461.80	17,551.60	21,643.70	4,089.80	13	2.7
State and local government	16,662.10	19,261.70	20,696.10	2,599.60	12.5	1.5
Retail trade	14,142.60	15,319.40	16,006.40	1,176.80	9.6	0.8
Transportation and warehousing	3,935.50	4,465.80	4,962.00	530.3	3	1.3
Wholesale trade	5,522.10	5,897.70	6,326.20	375.6	3.8	0.7
Utilities	639.5	548.5	517.6	-91	0.3	-1.5
Federal government	2,877.00	2,728.30	2,625.70	-148.7	1.6	-0.5
Agriculture, forestry, fishing, and hunting	2,730.90	2,138.60	1,965.50	-592.3	1.2	-2.4

Source: Bureau of Labor Statistics, 2008

*Employment figures in thousands

National Occupational Trends

CPE staff identified occupations most relevant to a bachelor’s degree in sustainable business by 1) identifying target audiences uncovered in past Eduventures research focused on sustainability-related topics, and 2) aligning relevant potential audiences with educational requirements (e.g., occupations requiring a bachelor’s degree). It is important to note that expert feedback suggested that since sustainable business is a relatively new field, there are challenges to alignment with a specific career path or occupation. Just as interest in sustainable business spans various industries,

career paths are likely to vary accordingly. The inquiring member should strive to clearly articulate career opportunities for graduates of their sustainable business program in marketing and communication.

For the purposes of this occupational analysis, CPE staff focused on management professionals spanning the construction, manufacturing, natural resources, trade, and professional services industry segments due to the inquiring member's emphasis on sustainable business education that incorporates environmental issues within its proposed program. Within these management-related occupations, CPE staff focused on applicable occupations typically requiring a bachelor's degree. These occupations are likely to be potential target audiences for a sustainable business bachelor's degree program.

The breakdown of educational requirements for the occupations identified as potential target audiences is listed below:

Bachelor's or higher degree, and work experience

- General and operations managers
- Natural sciences managers
- Purchasing managers
- Industrial production managers
- Farm, ranch, and other agricultural managers
- Legislators

Bachelor's degree

- Construction managers
- Property, real estate, and community association managers

Work experience in a related occupation

- Transportation, storage, and distribution managers
- First-line supervisors/managers of:
 - Construction trades and extraction workers
 - Mechanics, installers, and repairers
 - Transportation and material-moving machine and vehicle operators
 - Production and operating workers
 - Helpers, laborers, and material movers

Within management, business, and financial occupations applicable to sustainable business, general and operations managers employed the largest number of individuals in 2006, while construction managers are projected to experience the largest numeric growth through 2016. In contrast, industrial production and agricultural managers are projected to experience negative growth through 2016 nationally.

Among first-line supervisors/managers, managers of construction trades and extraction workers are projected to experience the most growth through 2016. Figure 2 displays trends and projections in sustainable business-related occupations nationally.

Figure 2. National Trends and Projections in Sustainable Business-Related Occupations

Occupation	2006 Employment	2016 Projected Employment	Numeric Growth (2006 to 2016)	Percentage Growth (2006 to 2016)	Total Job Openings (2006 to 2016)
Management, business, and financial occupations	15,396,883	16,992,699	1,595,816	10.36	4,575,171
Construction managers	487,077	563,584	76,507	15.71	151,977
Property, real estate, and community association managers	328,928	378,593	49,666	15.10	95,129
General and operations managers	1,720,460	1,746,324	25,863	1.50	440,668
Lodging managers	70,988	79,651	8,662	12.20	24,279
Transportation, storage, and distribution managers	94,012	101,858	7,847	8.35	35,752
Natural sciences managers	40,743	45,381	4,638	11.38	13,579
Purchasing managers	69,526	71,910	2,384	3.43	22,288
Legislators	64,507	65,171	664	1.03	12,896
Industrial production managers	157,341	148,094	-9,247	-5.88	54,282
Agricultural managers	1,316,600	1,229,870	-86,730	-6.59	116,836
Farming, fishing, and forestry occupations	1,039,039	1,010,461	-28,578	-2.75	251,451
Supervisors, farming, fishing, and forestry workers	53,219	52,999	-221	-0.41	9,888
Construction and extraction occupations	8,294,509	9,079,124	784,615	9.46	2,249,268
First-line supervisors/managers of construction trades and extraction workers	771,796	841,777	69,980	9.07	177,758
Installation, maintenance, and repair occupations	5,883,281	6,432,954	549,673	9.34	1,501,944
First-line supervisors/managers of mechanics, installers, and repairers	464,881	498,976	34,095	7.33	143,134
Production occupations	10,674,608	10,146,957	-527,650	-4.94	2,322,946
First-line supervisors/managers of production and operating workers	699,259	665,489	-33,770	-4.83	117,017
Transportation and material-moving occupations	10,233,225	10,695,365	462,140	4.52	2,951,678
First-line supervisors/managers of helpers, laborers, and material movers, hand	181,954	204,647	22,693	12.47	59,814
First-line supervisors/managers of transportation and material-moving machine and vehicle operators	226,065	249,171	23,106	10.22	69,227
Total, Sustainable Business-Related Occupations	40,170,553	41,438,346	1,267,793	3.2%	10,074,005

Source: Bureau of Labor Statistics, 2008

Implication: Educational opportunities for sustainable business programs are not restricted to any one particular industry sector, yet interest in sustainable business education spans a multitude of industries. The inquiring member should strive to align its targeting strategies to high-growth industries and occupations typically requiring a bachelor's degree credential.

Regional Demand for Sustainable Business Programming

CPE staff also analyzed labor market trends and projections related to sustainable business to identify the potential market for the proposed program in Wisconsin.

Industry Trends and Projections in Wisconsin

As of 2004, the trade, transportation, and utilities industries employed the largest number of individuals; however, professional and business services are projected to experience the largest numeric growth through 2014 of all sustainable business-related industries in Wisconsin. With regard to numeric growth projections, the professional and business services and trade, transportation, and utilities industries represent attractive potential markets for sustainable business programming. Figure 3 displays industry trends applicable to sustainable business in Wisconsin.

Figure 3. Trends in Industry Segments Applicable to Sustainable Business Programming in Wisconsin

Industry	2004 Employment	2014 Projected Employment	Numeric Growth (2004 to 2014)	Percentage Growth (2004 to 2014)
Professional and Business Services	252,530	309,800	57,270	22.7%
Trade, Transportation, and Utilities	554,430	606,200	51,770	9.3%
Construction	126,730	150,300	23,570	18.6%
Government	179,450	187,300	7,850	4.4%
Natural Resources and Mining	3,870	3,700	-170	-4.4%
Manufacturing	502,630	495,700	-6,930	-1.4%

Source: Wisconsin's Workforce and Labor Market Information System, 2008

Occupational Trends and Projections in Wisconsin

With regard to management occupations applicable to an undergraduate program in sustainable business, as of 2004, general and operations managers employed the largest number of individuals and are projected to experience the largest numeric growth through 2014. First-line supervisors/managers of construction trades, extraction workers and production and operating workers are also projected to experience relatively high growth through 2014. These occupations represent attractive potential target audiences for the proposed program. Trends and projections in occupations applicable to sustainable business in Wisconsin are displayed in Figure 4.

Figure 4. Trends and Projections in Sustainable Business-Related Occupations in Wisconsin

Occupational Title	2004 Employment	2014 Projected Employment	Numeric Growth (2004-2014)	Percentage Growth (2004-2014)	Total Job Openings
Management Occupations	123,280	138,590	15,310	12.4%	3,850
General and Operations Managers	28,280	32,330	4,050	14.3%	940
Construction Managers	4,740	5,490	750	15.8%	170
Transportation, Storage, and Distribution Managers	1,600	1,830	230	14.4%	50
Industrial Production Managers	5,190	5,370	180	3.5%	120
Property, Real Estate, and Community Association Managers	1,380	1,520	140	10.1%	40
Purchasing Managers	1,430	1,500	70	4.9%	40
Natural Sciences Managers	440	470	30	6.8%	10
Farm, Ranch, and Other Agricultural Managers	20	30	10	50.0%	0
Legislators	5,300	4,980	-320	-6.0%	70
Farming, Fishing, and Forestry Occupations	4,480	4,990	510	11.4%	160
Supervisors, Farming, Fishing, and Forestry Workers	430	500	70	16.3%	20
Construction and Extraction Occupations	143,780	166,670	22,890	15.9%	5,030
First-Line Supervisors/Managers of Construction Trades and Extraction Workers	11,170	12,950	1,780	15.9%	370
Installation, Maintenance, and Repair Occupations	115,770	126,720	10,950	9.5%	3,740
First-Line Supervisors/Managers of Mechanics, Installers, and Repairers	8,890	9,750	860	9.7%	310
Production Occupations	357,270	364,600	7,330	2.1%	9,290
First-Line Supervisors/Managers of Production and Operating Workers	22,810	23,870	1,060	4.6%	590
Transportation and Material Moving Occupations	232,570	255,780	23,210	10.0%	7,360
First-Line Supervisors/Managers of Helpers, Laborers, and Material Movers, Hand	4,160	4,490	330	7.9%	130
First-Line Supervisors/Managers of Transportation and Material-Moving Machine and Vehicle Operators	4,840	5,600	760	15.7%	190
Total, Sustainable Business-Related Occupations	100,680	110,680	10,000	9.9%	3,050

Source: Wisconsin's Workforce and Labor Market Information System, 2008

Income Levels of Sustainable Business-Related Professionals

With regard to estimated median incomes of professionals within sustainable business-related occupations in Wisconsin, general and operations managers have the highest average annual

salary, followed by construction and purchasing managers. As Figure 5 illustrates, the average annual salary for occupations related to sustainable business is more than \$64,000 in the state. Earnings potential for graduates of the proposed program are relatively high and may represent attractive career opportunities for prospective students.

Figure 5. Average Annual Salary Among Sustainable Business-Related Occupations in Wisconsin

Occupational Title	Average Annual Salary	Entry-Level Hourly Wage	Experienced Hourly Wage
General and Operations Managers	\$95,592	\$23.22	\$57.33
Natural Sciences Managers	\$95,369	\$31.87	\$52.84
Construction Managers	\$79,985	\$23.54	\$45.91
Purchasing Managers	\$79,025	\$24.42	\$44.78
Industrial Production Managers	\$78,009	\$24.88	\$43.82
Transportation, Storage, and Distribution Managers	\$74,012	\$23.07	\$41.84
Property, Real Estate, and Community Association Managers	\$61,934	\$16.54	\$36.39
First-Line Supervisors/Managers of Construction Trades and Extraction Workers	\$60,702	\$19.48	\$34.03
Farm, Ranch, and Other Agricultural Managers	\$57,187	\$22.17	\$30.16
First-Line Supervisors/Managers of Mechanics, Installers, and Repairers	\$54,939	\$17.78	\$30.73
First-Line Supervisors/Managers of Transportation and Material-Moving Machine and Vehicle Operators	\$52,468	\$15.20	\$30.24
First-Line Supervisors/Managers of Production and Operating Workers	\$49,886	\$16.08	\$27.93
First-Line Supervisors/Managers of Helpers, Laborers, and Material Movers	\$43,287	\$13.70	\$24.37
Legislators	\$20,133	\$5.89	\$11.57
Supervisors, Farming, Fishing, and Forestry Workers	NA	NA	NA
Average, Sustainable Business-Related Occupations	\$64,466	\$20	\$37

Source: Bureau of Labor Statistics, 2008

Implication: Given their large growth projections through 2014, the inquiring member institution should consider targeting its proposed program to the professional and business services and trade, transportation, and utilities industries. Furthermore, general and operations managers and supervisors/managers of construction trades and production and operating workers represent attractive potential target audiences for the proposed program.

The Value of an Undergraduate Sustainable Business Program

To assess perceptions of the proposed program, CPE staff probed experts within the sustainability field to provide insight into potential target audiences, delivery and content preferences, and attractiveness to prospective employers.

Key Trends in Sustainable Business Educational Programming

There are many challenges facing educators in the field of sustainability. In his book *Teaching Business Sustainability*, Dr. Ori Loucks, a retired professor in applied ecosystem studies and zoology at Miami University and noted scholar in the field of sustainability and business, notes that sustainable business is an evolving field still in its infancy as a management discipline. In addition, there is also the need to combat the unstated but often underlying assumption that many environmental and social issues represent non-valued-added effort. He emphasizes that educators need to help students explore the various ways in which the theoretical value of business sustainability can result in valuable and value-added practical outcomes. Thus, the inquiring member institution should consider incorporating practical applications of sustainable business theory within its proposed program.

Potential Target Audiences for a Sustainable Business Program

With regard to management professionals among whom sustainability education would witness demand, the associate director of the Association for the Advancement of Sustainability in Higher Education (AASHE) highlights two key target markets for business-related training with a *green* focus: middle management and, to a lesser extent, executive officers.

“Middle management for businesses [are among the most applicable audiences for continuing and professional education related to sustainability]. [These professionals] are the most likely to get their hands dirty on sustainable work and [will] require the most training. Seeing the trend [move] toward more sustainability [suggests it] would be pretty likely [for business professionals] to want that kind of knowledge now. [Also,] there have been a fair number of executive education programs [developed that] relate to sustainability.”

– Associate Director, AASHE

Moreover, the AASHE’s associate director and the founder of the Sustainable Business Institute points to a trend in which corporations are beginning to fill positions for chief sustainability officers or directors of sustainability with relevant *green* expertise. Although employers are not necessarily pursuing training of employees in sustainability, they are starting to seek professionals with such experience:

“[Employers supporting training and education in sustainability] is definitely something we are seeing, but mostly in anecdotal terms. Major businesses are looking to find people who really understand sustainability; and corporations are beginning to hire chief sustainability officers and staff below them.”

– Associate Director, AASHE

“In my experience, I’ve seen a lot of companies with the budget for a director of sustainability or a director of environmental health and safety. Companies are increasing[ly] re-labeling environmental health and safety positions as sustainability.”

The level of staffing typically depends on the size of the company, but businesses are increasingly employing staff dedicated to sustainability issues.”

– Chairman/Founder, Sustainable Business Institute

Furthermore, interviewed experts shared the sentiment that sustainability issues and sustainable business topics are applicable to a wide range of industries.

“Every single industry is remiss if they do not take into account sustainability [principles]. Cosmetics to construction to chemical companies, it really does go across the board. Every single business that either delivers a product or service would benefit from sustainability education.”

– President, U.S. Partnership for Education for Sustainable Development

One key challenge to note is that because the creation of sustainability-related roles and positions within organizations is a more recent trend, the Wisconsin Green Building Alliance representative emphasized the inexistence of a clear career path for graduates of the proposed program. She noted that it is not as a clear a path as for a mechanical engineer who obtains his or her professional engineer certification, but concedes that the trend in sustainability-related occupations will continue, thus an increasing clarity as to a defined career path will likely occur. She also noted, however, that the inquiring member should define its target audience; for example, if they incorporate an architecture and design component, target to relevant professionals, while a more broad sustainable business program will present challenges in targeting a specific audience.

Implication: Identified key prospective target audiences for a bachelor’s degree in sustainable business that the inquiring member should consider include entry-to mid-level management professionals; professionals within environmental health and safety positions; individuals aspiring to positions as directors of sustainability or sustainability coordinators; professionals within the construction, business services, manufacturing, and utilities sectors; and traditional undergraduate students. It is important to note that the proposed program does not have a specific and well-defined career path. This is likely the case because sustainable business is relatively new field, thus the inquiring member will encounter challenges communicating specific career opportunities.

Key Content

Research suggests that a sustainable business curriculum should incorporate a variety of sustainable-related issues and topics. Specifically, sustainable business typically incorporates an interdisciplinary approach and necessitates collaboration between students and faculty members of different disciplines/colleges. Experts emphasize the importance of involving multiple disciplines within the proposed program.

This sentiment is echoed by the Executive Director of the Wisconsin Green Building Alliance.

“From my 30 years of experience, when I look at degree program I think that the most important component of sustainability is to have an integrated cross-disciplinary focus.

Sustainability is about being involved and connected with everything else; understanding how one decision in an area can significantly impact another decision in another area.”

– Executive Director, Wisconsin Green Building Alliance

With regard to key content areas to consider incorporating into an undergraduate sustainable business program, experts shared similar insight. While they all emphasized an interdisciplinary approach and incorporation of general business and management courses, the key content areas within Figure 6 were also highlighted in conversations.

Figure 6. Curriculum Areas of Interest for a Sustainable Business Program Among Experts

Key Content Areas to Consider in a Sustainable Business Program
Change agent skills
Corporate social responsibility reporting
Energy efficiency; alternative and renewable energy
Environmental challenges and consumptions
Environmental management
Full cost accounting and lifecycle analysis of going <i>green</i>
<i>Green</i> marketing
<i>Green</i> pricing/environmentally preferred purchasing
Public policy and social issues
Understanding relationship between capital cost and operating cost
Understanding accounting principles to make a business case for incorporating sustainable practices and policies into a corporation
Understanding the triple bottom line, the accounting metric that incorporates economics, ecology, and social equity; designing projects and profits for the triple bottom line

The inquiring member institution should consider these content areas when designing concentration or emphasis areas within the proposed program. In particular, expert feedback noted the importance of including curriculum focused on understanding the triple bottom line, full-cost accounting, alternative and renewable energy, and corporate social responsibility reporting. The inquiring member institution should consider incorporating these discipline areas into the core sustainable business curriculum. In addition, suggested discipline areas for consideration for concentration or emphasis areas include *green* marketing, public policy, and environmental management.

Furthermore, one expert emphasized the importance of including a concentration area or focus to provide additional specialization for the graduate.

“A concentration in environmental management within a sustainable business program would make graduates much more employable and attractive.”

– Executive Director, Network for Business Education and Sustainability

In addition, the author of *Teaching Business Sustainability* argues the case for interdisciplinary learning.

“It is clear from much of the literature on sustainability that the concept does not easily lend itself to being pigeonholed, and that it crosses many of the functional areas of business. Indeed, it goes beyond just business learning to encompass many fields such as ecology, engineering, and biology. If students are to move beyond the narrow perspective that conventional business studies often entail, they need to be introduced to the wider vision that an interdisciplinary approach engenders.”

– Dr. Orié Loucks, Author, *Teaching Business Sustainability*

He also emphasizes the importance of case-study discussions, role-play exercises, and hands-on student consulting projects as effective experiential learning techniques for teaching sustainability curriculum. The inquiring member institution should strive to incorporate experimental learning techniques within its sustainable business curriculum that involves practical implementation.

In contrast, experts also noted key challenges associated with specific content areas. The inquiring member institution should be aware of these considerations when structuring and designing the proposed program. With regard to conservation and sustainable development, expert feedback suggests precisely defining these areas, as a broad approach to these key components of sustainability is not particularly valuable. In addition, the interest in and value of teaching sustainable agriculture and carbon footprint calculation, reduction, and mitigation courses may be geographically bound. For example, the interviewee located in the Bay Area emphasized that while carbon issues were of the utmost importance to their region, it may not be as important to the Wisconsin region. Key considerations and challenges associated with curriculum areas are displayed in Figure 7.

Figure 7. Key Considerations and Challenges Associated with Specific Curriculum Areas of Interest for a Sustainable Business Program Among Experts

Content Area	Key Considerations and Challenges
Carbon footprint calculation, reduction, and mitigation	<ul style="list-style-type: none"> • Carbon is a huge issue to the interviewee located in Silicon Valley, but this issue may be an area of more interest to a specific geography
Conservation	<ul style="list-style-type: none"> • Conservation falls under a wide array of topics • Need to specify conservation of energy, natural resources, or wildlife • A specific area of conservation would make the degree program more attractive • Not necessary to require a course in wildlife conservation in northern Wisconsin
Green renovations/building	<ul style="list-style-type: none"> • This area could potentially be included within a sustainable business program • It is not necessary for a business professional to know about this market • Construction and design organizations are already covering <i>green</i> building • Highly competitive and more mature market
Regulation of green applications and technologies	<ul style="list-style-type: none"> • Some corporations and businesses involve the regulation of <i>green</i> applications and technologies within their own legal department or lobbyist • It may not be a necessary part of an undergraduate degree program
Sustainable agriculture	<ul style="list-style-type: none"> • This area may be geographically bound • Overall may be important to include but not from a college of agriculture course • More valuable if the course involves an overview of sustainable agriculture (e.g., factory verses family farms, community-supported agriculture, use of energy on farms, etc.) as opposed to technical emphasis
Sustainable development	<ul style="list-style-type: none"> • Sustainable development is too general and broad • Need to specify a particular area of sustainable development

IMPLICATION: The inquiring member should consider incorporating a core business and management curriculum with an interdisciplinary approach to the sustainable business component. In addition, the inquiring member should strive to incorporate a practical approach to instruction and consider concentration areas, such as green marketing and environmental management.

Employer Support for Sustainable Business Programs

Overall, expert feedback suggested that businesses and corporations are increasingly taking an interest in sustainability and sustainable business practices. While they are taking an interest and beginning to hire professionals to fill roles such as directors of sustainability and sustainability coordinators, experts noted that currently, the extent of employer support for specific sustainability-related programs is not necessarily robust.

In addition, the founder of the Sustainable Business Institute noted that in the weakening economy, particular in California, the training departments and personnel within corporations are typically the first to be let go. According to the founder, the environmental health and safety

professionals are typically the second. However, the trend of businesses rebranding these environmental health and safety positions as sustainability directors is a clear advantage.

“It is a really tight economy and has not seen what the fallout will be yet. There will be a lot of belt-tightening on the corporate side, but personally I think sustainability is your competitive edge inside a company, and if you frame it that way, these positions will sustain.”

– Chairman/Founder, Sustainable Business Institute

The President of the U.S. Partnership for Education for Sustainable Development advises the inquiring member to incorporate sustainability and sustainable business issues into its entire curriculum with its business school. She emphasized that the incorporation of sustainable business curriculum into all business programs, both at the undergraduate and graduate level, will make graduates more attractive to prospective employers. Furthermore, she noted that this is an effective messaging and positioning strategy for the entire business school, and that it will appeal to the business community.

“[If schools do not incorporate sustainability into business curriculum,] what you have is an incomplete business program and career preparation for business. If you do incorporate sustainability, the institutions can now message that the whole business school has been updated.”

– President, U.S. Partnership for Education for Sustainable Development

Furthermore, according to the executive director of the Network for Business Education and Sustainability, within its membership, he noted companies are increasing the number of positions related to sustainability and the environment, such as sustainability coordinators or environmental coordinators. Thus, opportunities for tuition support are likely to increase in the future. He also noted that while some larger corporations may seek candidates with master’s degree for sustainability-related roles, there are opportunities for professionals holding an undergraduate credential as well, especially with a specific area of focus, such as environmental studies and sustainable business.

“I think to be hired with a bachelor’s degree rather than a master’s degree does require a strong environmental background because a lot of businesses see [sustainable business] as an expansion of environmental coordination in terms of making the business case [for incorporating sustainable business principles and practices].”

– Executive Director, Network for Business Education and Sustainability

Preferred Delivery Format

While the majority of interviewed experts noted they were not in a position to comment on the preferred delivery format or structure of the proposed sustainable business program, two experts noted the appeal of a hybrid program.

The associate director of the AASHE points to the trend of hybrid delivery among sustainable business degree programs.

“Among the business education community [of institutions offering sustainability-related education for the business field], those are mostly small schools that do distance

education and most of their coursework is through the Internet [and require students to] get together about once a month. Most [business programs focused on sustainability] are not face-to-face. Although that's not the case in the other fields as much, most business students are employed and trying to work while they [go to school]."

– Associate Director, AASHE

In addition, the President of the U.S. Partnership for Education for Sustainable Development advised that a combination of an online and hybrid component, i.e., a strategic online program, would be the most attractive format.

Overall Value

Overall, expert feedback on the proposed sustainable business program was overwhelmingly positive; however, one interviewed employer in Wisconsin noted that the proposed program did not necessarily meet their needs given their preferences for engineering professionals. Feedback with regard to the value of the proposed program largely focused on the increasing level of demand for sustainability-related educational programming, the importance of incorporating sustainability issues into business curriculum, and the attractive market opportunity for the inquiring member institution.

The following qualitative comments demonstrate this positive perception of the proposed program among experts in the sustainability and sustainable business field.

"I think [the proposed program] would be valuable ... I think the [inquiring member] is on the cusp of something here, and I would hate to see them lag behind."

– Executive Director, Wisconsin Green Building Alliance

"Yes, there is definitely a market for such a [sustainable business] program; it would be valuable to create."

– Executive Director, Network for Business Education and Sustainability

"To teach a business degree and to not include [sustainable issues] is to teach an outdated curriculum."

– President, U.S. Partnership for Education for Sustainable Development

"The interest in green business is just expanding exponentially. In my experience, undergraduate students, including working adults seeking to complete their degree, are getting really excited about a traditional business program that incorporates sustainable business. I definitely think these trends are only going to increase, especially with the increased awareness of environmental issues; the increased interest in sustainability and sustainable business will likely continue."

– Executive Director, Network for Business Education and Sustainability

While he noted that the proposed program is valuable, the director of the University Leaders for a Sustainable Future also advised creating a program targeted to the traditional undergraduate population.

"I think the [proposed program] is a great idea and that the time is right. But my one question, why not offer a green bachelor's program for typical undergraduate business

majors? This would undoubtedly be popular. The sooner we can get forward-looking undergraduate programs to model this, the better!”

– Director, University Leaders for a Sustainable Future

In addition, while the perceptions of the proposed program were positive, one expert also emphasized the importance for the inquiring member to stay attuned to the current practices and policies within sustainable business, especially since these issues are constantly changing. This will help to ensure a curriculum that is up-to-date and valuable for students and industry.

“Another area to consider is the state of sustainable business, particularly energy costs and uncertainty in global markets. The state will be very different in four to five years, and institutions must be aware of these changes and keep them in mind when updating curriculum and programs.”

– Executive Director, Wisconsin Green Building Alliance

The author of *Teaching Business Sustainability* also noted the challenges associated with developing a program within a relatively new discipline.

“I do appreciate why they are opening up this dialog. Still, there are issues such as availability of trained teachers and the body of relevant scholarship for people to read, as well as the availability and market for students. These issues will get solved sometime soon, so the question is really what school will do it first.”

– Dr. Orie Loucks, Author, *Teaching Business Sustainability*

CPE staff also gathered insight from the manager of workforce diversity and employment at We Energies. In regard to the company’s specific educational needs, she noted that during a recent discussion of their workforce needs among executive level professionals, the greatest need identified was in the area of engineering. She noted that a graduate of an engineering program with coursework in renewables and related sustainability-disciplines would be valuable; however, an engineering graduate with a major in a sustainability-related discipline without a strong power background will likely not be in need in the future.

“We have no needs for people with a business background in green markets. What has been the most successful for us is to hire people with an engineering background and solid work experience in power generation and/or reliability and then train them in the green market. People without a power engineering background have not worked well for us in the past... we have little if any need for the [proposed] program currently.”

– Manager of Workforce Diversity and Employment, We Energies

The inquiring member institution may encounter challenges gaining employer support within technical and specialized areas, such as engineering. Thus, the inquiring member institution should continue the dialogue with Wisconsin employers to identify potential partnership opportunities.

Implication: Demand exists for the proposed sustainable business program. The market opportunity is attractive, as most current programs are at the graduate level; however, this also may indicate less demand at the undergraduate level. The inquiring member is in a position to strategically differentiate its proposed program and be at the forefront of the market. The inquiring member should be aware of the challenges associated with an emerging field and strive to be responsive to the changing needs of the sustainability field and the needs of the business community.

Existing Competition of Sustainable Business Undergraduate Programming

In addition to soliciting input from interviewed experts on existing providers of related sustainable business programs, CPE staff conducted secondary research to identify existing providers of sustainable business-related undergraduate programs. The majority of institutions identified through expert conversations were programs offered at the graduate degree level or M.B.A. programs. Thus, it appears that nationally competition for sustainable business programs at the undergraduate level is relatively low.

The director of the University Leaders for a Sustainable Future also noted the lack of sustainable business programming at the undergraduate level.

“To date, almost all attention has been at the graduate level (including at George Washington University), but they are now starting to redirect some of the sustainable business courses they offer to younger folks. Starting soon, [George Washington University] will likely encourage undergrads to take any new green business courses developed. [My contact at George Washington University] hopes you pursue this aggressively, and feels the time is ripe.”

– Director, University Leaders for a Sustainable Future

CPE staff identified two relevant bachelor’s degree programs: a B.S. in sustainable business offered by Aquinas College in Michigan and a B.B.A. in managing sustainable enterprise at the College of Santa Fe in New Mexico. It is important to note, however, that environmentally focused bachelor’s degree programs may also be potential competitors to the proposed programs.

Both identified programs are targeted to traditional undergraduate students. The sustainable business program at Aquinas College tends to incorporate more technical business and science core, while the College of Santa Fe’s programs are largely a liberal arts core. There appears to be opportunity for the inquiring member to differentiate its proposed program by targeting adult students.

Figures 8 and 9 profile the identified programs at Aquinas College and the College of Santa Fe.

Figure 8. Sustainable Business Undergraduate Program Offering at Aquinas College

Name of Institution		Aquinas College
Location		Grand Rapids, MI
Program Offering		Bachelor of Science in Sustainable Business (minor and certificate options available)
Major Requirements		<ul style="list-style-type: none"> • Principles of Accounting - Financial • Principles of Accounting - Managerial • Principles of Management • Principles of Marketing • Financial Management • Ethics and the Ecology of Commerce • Cases in Sustainable Business • Spreadsheets • Microeconomics • Intro to Environmental Studies • Advanced Environmental Studies • Environmental Chemistry • General, Organic, and Biochemistry (1) • General, Organic, and Biochemistry (2) • Physical Science
Required Sustainable Business Courses		<ul style="list-style-type: none"> • Industrial Ecology • Environmental Business Management • Internship
Two Elective Course Requirements		<ul style="list-style-type: none"> • Sustainable Energy Systems • Environmental Regulatory Compliance • Environmental Economics and Policy • Building Social Capital
Total Credits	Bachelor's degree	62
	Minor	28
	Certificate	18
Marketing Message		"The Aquinas Sustainable Business Degree program fosters ecological and social intelligence in all business decisions, and is the only undergraduate program of its kind in Michigan and possibly the United States ... Aquinas College offers the only sustainable business bachelor's degree in Michigan, and perhaps the only current sustainable business undergraduate program in the country."
Target Audience		Traditional undergraduate students
Career Opportunities		There are many corporations in Michigan that are presently engaged in sustainable business practices, including General Motors, Ford Motors, Steelcase, Herman Miller, Dow Chemical, and numerous small companies. These companies have expressed a keen interest in hiring interns and graduates of this program. In addition, most of our program graduates have landed some interesting positions at a variety of organizations. Sustainable business practices restore environmental quality, promote stable and healthy communities, and increase long-term profitability.
URL		http://www.aquinas.edu/sb/students.html

Figure 9. Sustainable Business Undergraduate Program Offering at the College of Santa Fe

Name of Institution		College of Santa Fe
Location		Santa Fe, NM
Program Offering		Bachelor of Business Administration in Managing Sustainable Enterprise (minor available)
Core Requirements		39 credits of liberal arts core
Required Sustainable Business Courses		<ul style="list-style-type: none"> • Accelerating Change and Sustainability • The Manager's New Clothes • Analytical Tools • Deciphering Value and Making a Statement • From Here to Economy • Anatomy of Power and Governance • Leading the Sustainable Enterprise • The Ecological Enterprise • Critical Perspectives on Supranational Institutions • Evolution, Revolution, and Transformation • Deep Change • Future Waves • The Human Condition and the Conditioning of Humans
Total Credits	Major	128
	Minor	24
Marketing Message		"CSF's Lasallian Tradition emphasizes service to others as an integral part of higher education. The managing sustainable enterprises major takes its lead from this tradition as well as an overarching humanist perspective on the bottom line. Managing sustainable enterprise is a cutting-edge curriculum aimed at students who wish to focus on the larger business challenges arising from globalization and sustainability. As a field of inquiry, students will examine the interdependency of business practice and wider societal concerns and will learn how to manage this complex dependency for the mutual benefit of both realms."
Target Audience		Traditional undergraduate students
URL		http://www.csf.edu/academics/business_administration/undergraduate

Implication: The majority of existing sustainable business-related programs are at the graduate level, thus an undergraduate program appears to be an attractive market opportunity. Furthermore, the working adult student population appears to be a target audience not being served currently, therefore the inquiring member institution may be well positioned to differentiate its proposed program. It is important to note, however, that the lack of undergraduate programs in related disciplines may also indicate low levels of demand in the market. Additional primary research of a potential target audience is recommended to further assess demand for the proposed program.

Analysis and Recommendations

This research investigation explores the opportunity for the inquiring member institution to launch a bachelor's degree program in sustainable business with a *green* concentration or focus. The inquiring member institution should use the results of this research investigation to identify marketing, branding, and differentiation opportunities for the proposed program. In an effort to facilitate communication and collaboration, as well as identify areas to leverage, the inquiring member institution should share the results of this investigation with internal decision-makers to discuss key findings and identify programmatic opportunities.

Overall, there appears to be market opportunity for the inquiring member institution to offer the proposed sustainable business program. As this research investigation demonstrates, sustainability-related training and education are in demand nationally. Businesses are increasingly incorporating sustainable practices into their operations, and institutions are recognizing the value of incorporating a sustainability theme into curriculum. Clearly, there are opportunities for the inquiring member institution to capitalize on this trend and offer a unique program that differentiates itself, while remaining at the forefront of the market.

Potential Target Audiences

Sustainable businesses operate across a wide range of business sectors and industry clusters, thus, educational opportunities for sustainable business programs are not restricted to any one particular industry sector, yet interest in sustainable business education spans a multitude of industries.

Since the proposed program does not have a specific and well-defined career path, the inquiring member will encounter challenges communicating specific career opportunities. The inquiring member should strive to align relevant concentration areas to specific occupations that may serve as potential target audiences. Furthermore, the ability to specialize within a related area may increase the applicability and attractiveness of the proposed program to prospective students.

In addition, since the proposed program will be offered as a bachelor's degree completion program, the inquiring member should identify associate degree programs that may align with the proposed sustainable business program, such as two-year programs in manufacturing or production-related disciplines. Aligning concentration areas to high demand disciplines at the associate degree level may also increase the attractiveness of the proposed program, as well as allow the inquiring member institution to leverage the existing expertise of prospective students.

While expert feedback and secondary research suggests that potential audiences vary widely, key prospective target audiences that emerged in this research investigation include:

- Professional and business services
- Trade, transportation, and utilities
- General and operations managers
- Construction managers
- First-line supervisors/managers of construction trade workers and production and operating workers
- Entry- to mid-level management professionals
- Professionals within environmental health and safety positions
- Individuals aspiring to positions as directors of sustainability or sustainability coordinators
- Professionals within the construction, business services, manufacturing, and utilities sectors
- Traditional undergraduate students

Differentiation Strategies

- Target non-traditional undergraduate program to working adult students
- Explore hybrid delivery for the proposed program

- Incorporate general business requirements, but place emphasis on interdisciplinary courses within the sustainable business core requirements to provide greater expertise
- Offer concentration or emphasis area to provide greater specialization and attractiveness to prospective employers such as *green* marketing, environmental management, and public policy

In addition, CPE staff developed a strength, weakness, opportunity, and threat (SWOT) analysis table to assess those factors that may impact improvement opportunities for the inquiring member institution’s proposed sustainable business program. The SWOT analysis provides an understanding of program strengths and weaknesses, the opportunities available for potential program growth, and those factors (i.e., threats) that may impact overall program success.

Figure 10. SWOT Analysis of the Inquiring Member Institution’s Proposed Bachelor’s Degree in Sustainable Business

Strengths	Weaknesses
<ul style="list-style-type: none"> • Low levels of competition exist for undergraduate programs in sustainable business nationally • Identified undergraduate providers target traditional students • Market demand for sustainability-related education and training is likely to continue 	<ul style="list-style-type: none"> • Lack of clear, distinct career path for graduates • Emerging field may necessitate increased awareness of issues faced in the sustainability field
Opportunities	Threats
<ul style="list-style-type: none"> • Explore opportunity to include interdisciplinary curriculum and concentration areas for greater specialization • Explore opportunity to collaborate across various colleges and academic departments • Continue dialogue with industry to identify partnership opportunities and ensure alignment with their needs • Explore alternative delivery methods, such as a hybrid format • Consider incorporating sustainability theme throughout all business programs 	<ul style="list-style-type: none"> • Sustainability-related management roles may require a master’s degree credential at larger corporations • Lack of bachelor’s degree programs may indicate lower levels of demand for the undergraduate credential

Additional Research Opportunities

Prior to launching a sustainable business bachelor’s degree program, CPE staff recommend the following next steps:

- Conduct an internal assessment to identify potential course/infrastructure in which to leverage
- Strive to communicate market opportunity systemwide and promote collaboration between academic colleges and departments
- Conduct primary research of prospective students

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Appendix

Figure 11. Top 10 U.S. Institutional Providers of Full-Time M.B.A. Programs That Incorporate Social and Environmental Stewardship into the Curriculum

Rank	Institutions in the United States
1	Stanford University
2	The University of Michigan
3	University of California, Berkeley
4	University of Notre Dame
5	Columbia University
6	Cornell University
7	Duquesne University
8	Yale University
9	New York University
10	The University of North Carolina at Chapel Hill

Source: Beyond Grey Pinstripes, The Aspen Institute, Center for Business Education, 2008

Figure 12. Top Institutional Providers of M.B.A. Curriculum and Research That Incorporate Sustainability-Related Issues

Rank	Name of Institution
Institutions that best integrate social, environmental and ethical issues into the classroom experience	
1	Stanford University
2	York University
3	Yale University
4	University of California, Berkeley
5	Instituto de Empresa
6	ESADE Business School
7	Duquesne University
8	The University of Michigan
9	Columbia University
10	University of Notre Dame
Institutions that have published the most research on social, environmental, and ethical issues	
1	The University of Michigan
2	The University of Nottingham
3	Stanford University
4	The University of North Carolina at Chapel Hill
5	York University
5	University of California, Berkeley
5	University of Virginia
8	University of Bath
9	University of Notre Dame
9	University of Western Ontario
9	Duke University
9	Boston College

Source: Beyond Grey Pinstripes, The Aspen Institute, Center for Business Education, 2008