

Applied Baccalaureate Degree Program Lake Washington Institute of Technology Statement of Need

Bachelor of Applied Science
Applied Management-Entrepreneurship

February 15, 2018

COVER SHEET STATEMENT OF NEED

Program Information

Institution Name: Lake Washington Institute of Technology						
Degree Nam	e: BAS Applied Management-Entrepreneurship	CIP Code: 52.0703				
Name(s) of existing technical associate degree(s) that will serve as the foundation for this program:						
Degree:	Degree: AAS Accounting CIP Code: 52.0302 Year Began: 1991					
Degree:	AAS Business Technology CIP Code:11.0601	Year Began: 1991				
Proposed Sta	art Implementation Date (i.e. Fall 2014): Fall 2020					
Projected En	nrollment (FTE) in Year One: 15 50 at Full Enrollm	nent by Year: 2023				
Funding Sou	ırce: State FTE: ⊠ Self-Support: □	Other: 🛛				
Mode of Deli	·					
Single Camp	bus Delivery: Kirkland, WA					
Distance Lea	arning: Some hybrid coursework					
Statement of	Need: Page Limit: 20 pages					
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Introduction

Lake Washington Institute of Technology is centrally located in Washington State's high-technology corridor in King County, near Seattle. A public technical college with its main campus in Kirkland, it serves a diverse student body from throughout the Puget Sound region and countries around the world. More than 4,200 students enrolled at the college in Fall Quarter, 2015. The Redmond Campus, in operation since 2005, is located six miles from the main campus. LWTech has served its community since 1949 and has been a member of the Washington State Community and Technical college system since 1991. The Northwest Commission on Colleges and Universities accredits the college at both the associate and baccalaureate degree level.

The college began as Lake Washington Vocational Technical Institute, part of the Lake Washington School District. From initial instruction in a sewing course, the college grew steadily to include vocational programs in trade and industry, adult education, and community services classes. The main campus opened in Kirkland in 1983. In 1991, legislation converted the five vocational-technical institutes in Washington State into technical colleges; making them members of the Washington State Community and Technical College system. The college's scope and character changed significantly during these years, evolving from a vocational training school to an institute of technology with a comprehensive curriculum that includes professional-technical programs, as well as basic skills, academic and continuing education programs. On July 22, 2011, the college officially changed its name to Lake Washington Institute of Technology.

Growth in facilities matches growth in academic and professional-technical programs. New buildings in 1992 and 2002 increased the size of the Kirkland Campus to nearly 400,000 square feet. In 2005, the Redmond Campus opened providing the college with a second major facility. In 2011, completion of an 83,700 square foot Allied Health Building provided new facilities for programs in health care fields.

LWTech currently offers more than one hundred degree and certification options. In 2009, following state agency and NWCCU approval, the college opened an applied baccalaureate degree program in Applied Design. The college received a commendation after the Fall 2011 visit for "...establishing a rigorous and viable Bachelor of Technology degree program in Applied Design..." Two new baccalaureate degrees followed in Fall 2014.

Today, Lake Washington Institute of Technology proposes its eleventh baccalaureate degree, the Bachelor of Applied Science Applied Management – Entrepreneurship (AME) degree. Graduates will be prepared for supervisory positions as well as ready to function as a small business owner or independent contractor/consultant. Additionally, they will be ready to pursue graduate education at the Masters level from state or regional institutions. Applied Management and Entrepreneurship is intended for those students who have received their applied Associate's degree in several professional-technical disciplines and seeking to advance or change their careers. The combination of their past practical experience and applied business management education with an entrepreneurial skill set will prepare graduates to assume a leadership role in a variety of businesses.

Statement of Need - Criteria #1

1. Relationship to institutional role, mission, and program priorities. Describe how the proposed program reflects and support the mission of the institution and reflect program priorities.	he role and
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The mission of Lake Washington Institute of Technology is "To prepare students for today's careers, and tomorrow's opportunities." LWTech's role has always been as a workforce institution offering high demand educational programs critical to students preparing to enter or advance in an occupation. Four Core Themes are critical to accomplishing the college mission.

Pathways	Lake Washington Institute of Technology is accessible to the community by providing multiple entrance points and educational pathways. The college is a conduit for students to upgrade their skills, transition into new careers, or further their education and training.			
Student Achievement	At Lake Washington Institute of Technology, students gain the skills and knowledge needed to achieve their educational goals and to participate in the workforce.			
External Engagement	Lake Washington Institute of Technology forms partnerships with governmental and community organizations, educational institutions, business, and labor in order to effectively support the Institution's mission.			
College Community	Lake Washington Institute of Technology provides a safe, supported and engaging learning environment for students and work environment for faculty and staff.			

LWTech's Strategic Plan and Master Instructional Plan includes development of baccalaureate degrees.

Strategic Priority	Instruction should expand its BAS offerings and increase their efficiency
- Growth	

Additionally, new programs and pathways are a priority in academic planning. LWTech's program development priorities are to:

- develop and expand from the institution's areas of strength;
- respond to changing labor market needs;
- facilitate student completion;
- share courses, facilities and equipment amongst programs;
- control costs for the student and the college.

The proposed BAS Applied Management-Entrepreneurship degree program reflects and supports LWTech's role, mission, and priorities. The BAS AME program will provide a new pathway for students with technical/technician training to pursue self-employment and thrive in the entrepreneurial environment which has fueled our contemporary prosperity in the Puget Sound region.

Statement of Need - Criteria #2

2. Support of the statewide strategic plans.	Describe how the program will support SBCTC Mission goals outline in the Mission Study and WSAC policies and goals for higher
	education as articulated in the Strategic Master Plan for Higher Education.

The proposed BAS Applied Management-Entrepreneurship degree program supports statewide strategic plans articulated in the SBCTC *Mission Study* and WSAC *Strategic Master Plan for Higher Education*.

The State Board for Community and Technical Colleges (SBCTC) published the *Mission Study* in May, 2010. Goals identified include:

Goal #2	Close the statewide skills gap for technically trained workers
Goal #4	Contribute more to the production of baccalaureate degrees

The BAS AME program will contribute to the accomplishment of both of these goals. Entrepreneurship is a catalyst for our regional economy. This program will increase the pool of baccalaureate prepared, ready-to-work innovators possessing entrepreneurship and small business management skills. Similarly, it will yearly add to the total production of baccalaureate degree holders in Washington, helping the state achieve its target of 1400 baccalaureate graduates needed by 2030 as identified in the *Mission Study*.

The Washington Student Achievement Council (WSAC) included the following goal in its *Road Map 2013*:

Align postsecondary programs with employment opportunities.

The BAS AME program will align with employment opportunities in terms of the rising credentials expected of job candidates. Employers of professionals are increasing their preference for candidates who possess a baccalaureate degree. LWTech has effective associate's degree programs, but to align its efforts with industry and provide students with full access to future employment opportunities, the college needs to expand the scope of our programs. The associate's degree programs have effective, engaged advisory committees with essential industry representatives. LWTech also employs part-time faculty who work in the field. The contributions of both groups keeps the curriculum aligned with industry needs, but only by adding the BAS AME opportunity will output be fully aligned with industry expectations and the opportunities in the marketplace and greater economy, including the increasing expansion of the "gig economy" where contractors, contract work, co-work, and other alternative forms of employment are taking hold. Entrepreneurial trained graduates with a technical background will be well positioned to thrive in the future economy.

Statement of Need - Criteria #3

- 3. Employer/community demand for graduates with baccalaureate level of education proposed in the program.
- •Employer demand must exceed regional supply of graduates with relevant degrees.
- •Demand must be based on data sources including but not limited to local employer survey, traditional labor market data, industry data, trade associated data, and other transactional data. Please provide evidence of the gap between the numbers of program graduates verses the number of job opening locally and regionally. Refer to attached supply/demand gap rubric for additional guidance.

LWTech's proposed BAS Applied Management - Entrepreneurship degree will contribute to addressing the employment and education gap in Washington State when it comes to associate's degree prepared technicians who receive baccalaureate level education in applied management and entrepreneurship.

Using the required rubric supplied by SBCTC for this criteria we offer the following evidence of employer demand using calculation method #1 for existing occupations.

If local demand/supply information is available for the specified degree program and target occupation(s),

For demand: Provide local/regional demand data for the targeted occupation job title(s) from traditional labor market data, industry data, trade association data, or other transactional data. (Provide absolute numbers, not just percentages)

The proposed BAS AME program will primarily prepare graduates to function as small business owners or independent contractors/consultants. Above all else, the focus of this BAS program is preparing students to utilize the knowledge and skills developed in their applied associate's degree to start or grow their own business. A Bachelor's degree is not required to become an entrepreneur and those skills can be acquired by a variety of pathways. LWTech considered meeting our students' demand for further training in Entrepreneurship through additional coursework, new certificates, continuing education training, and a pathway to a second associate's degree. Our decision is to reward students with a BAS credential recognizing their additional two years of credit-bearing coursework. This academic award is aligned with their academic achievement of completing an additional 90 credits. Any other award does not help students as much in terms of continuing their education or career in the future should that be graduate school or moving back to the corporate world. LWTech is confident leveraging its established capabilities in providing applied baccalaureate education will create a new supply of entrepreneurs for King County communities who started as a professional-technical program graduate.

The program also serves to increase the supply of graduates prepared to work as Managers in technical fields related to their Associate's degrees. At LWTech, this includes graduates of our applied business related programs like Accounting and Business Technology, and other fields where we have experienced a significant student intent to be self-employed including Culinary

Arts, Horticulture, Fitness, Automotive, Welding and Machining. The BAS AME is designed to serve all of these graduates. The table below indicates the levels of employment and wages for related Manager occupations requiring a baccalaureate degree for the greater Seattle area compiled from ESD data.

Area	Occupation title	SOC code	Estimated employment	Average wage	25th percentile	Median	75th percentile	Annual wage
Seattle-Bellevue-Everett, WA	Financial Managers	11-3031	8,069	\$69.24	\$48.23	\$62.90	\$81.66	\$144,002
MD	Public Relations & Fundraising.	11-2031	1,483	\$57.45	\$40.61	\$52.39	\$69.90	\$119,481
	Purchasing Managers	11-3061	1,507	\$67.15	\$52.34	\$64.30	\$78.64	\$139,665
	Sales Managers	11-2022	4,808	\$66.13	\$41.94	\$59.12	\$82.08	\$137,553
	Sales Reps/Wholesale/Mfg, Te	41-4011	3,671	\$45.37	\$24.97	\$43.93	\$59.33	\$94,370

SOURCE: Washington State Employment Security Department

All of these Manager occupations are listed as "In Demand" for King County on the Employment Security Department Demand/Decline list for occupations, except Purchasing Managers listed as "Balanced." Employment demand is summarized in the table below.

SOC	Occupation	Outlook	Estimated Annual Openings (King Co.) 2015-2025	Average Wages
11.3031	Financial Managers	In Demand	2315	\$71.95
11.2031	Public Relations & Fundraising Managers	In Demand	408	\$58.62
11.3061	Purchasing Managers	Balanced	270	\$67.67
11.2022	Sales Managers	In Demand	1654	\$70.41
41.4011	Sales Representatives, Wholesale & Manufacturing, Technical & Scientific Products	In Demand	951	\$43.87
	TOTAL		5598	

SOURCE: Washington State Employment Security Department

In sum, LWTech estimates the King County job openings to be 5,598 per year for just the Manager positions related to the primary associate degree feeder programs. Entrepreneurs are not tracked by ESD as a separate occupation, and sole proprietors may not be represented in the survey data, so we estimate the gainful employment opportunities to be at least twice this number.

Anyone can be an entrepreneur regardless of formal education. There is no requirement to have a degree of any kind, including a baccalaureate degree. However, there is some data on how many entrepreneurs and business owners possess a baccalaureate degree. In the latest (2015) survey of business owner demographics by the U.S. Small Business Association, the SBA found 39.2% of owners had a Bachelor's degree or higher (SBA.gov, *Issue Brief 6*). The business network CNBC conducted a survey in July, 2017 and found 26% of entrepreneurs are college graduates. Therefore, in approximately a third of cases successful business owners are the beneficiaries of education beyond the Associate's degree level. It is the intent of this proposal to provide a

pathway to attain baccalaureate level knowledge and provide a meaningful credential that will serve future entrepreneurs in their roles as business owners and in the technical workforce should they re-enter their original field of practice.

For supply gap: Provide data on the number of programs and the number of annual program graduates for all four-year colleges that supply your region. Is the number of current annual graduates insufficient to meet current and projected demand? (The result of demand minus supply).

Using data from the *National Center for Education Statistics (NCES)*, the table below details the 2016-2017 supply of *baccalaureate* level graduates from regional institutions for CIP codes corresponding (as listed on the *NCES SOC to CIP Crosswalk*) to the selected occupational Manager SOC codes. Additionally, graduates from Entrepreneurship programs are included.

CIP	Title	Institution	Graduates
52.0101	Business/Commerce, General	Argosy U	3
		Northwest U	1
		Seattle Pacific U	76
		Seattle U	2
52.0201	Business Administration and Management, General	CWU*	31
		City U - Seattle	146
		Northwest U	52
		Seattle U	53
		U of Phoenix - Tukwila	30
		UW - Bothell	279
		UW - Seattle	25
52.0299	Business Administration, Management and Operations, Other	CWU*	127
52.0302	Accounting Technology/Technician and Bookkeeping	Bellevue College	4
52.0305	Accounting and Business/Management	U of Phoenix - Tukwila	4
52.0701	Entrepreneurship/Entrepreneurial Studies	Green River College	23
		UW - Seattle	26
520801	Finance, General	CWU*	74
		Seattle U	92
		U of Phoenix - Tukwila	1
		UW - Seattle	222
52.0899	Finance and Financial Management Services, Other	City U - Seattle	0
	TOTAL		1271

^{*}All CWU graduates statewide are included, not only those from university centers or online programs. SOURCE: U.S. Department of Education IPEDS data/College Navigator 2016-17 Completions by Program (CIP code)

The total annual output from the higher education system in LWTech's service area for graduates with relevant managerial and/or entrepreneurial skills can be estimated at least 1,271 A comparison to the King County estimated annual job openings of 5,598 yields an estimated gap of -4,327.

Overall, for all managerial occupations, Washington State ESD estimates there to be annual supply gap of over 10,000 in the King-Snohomish counties area. Therefore, our estimate 4,613 for a subset of managerial occupations served by the BAS-AME is reasonable.

Locale	Measure Names	Wages
King-Snohomish Counties	Median Regional Earnings (All Occupations)	\$60,075
	Average Annual Supply Gap	10,326
	Average Annual Graduates	2,595
	Average Annual Job Postings	12,921

SOURCE: Washington State Employment Security Department

In sum, there is a workforce need for more highly trained managerial and entrepreneurial professionals in LWTech's service area, there are more baccalaureate options needed for applied Associate degree graduates, and LWTech's graduates will not be in competition with similar graduates from other institutions as the employment gap is so large.

Statement of Need - Criteria #4

4.	Applied baccalaureate
	program builds from
	existing professional and
	technical degree program
	offered by the institution.

Describe the existing professional and technical degree program that will be used as the foundation for applied baccalaureate program. Include how long the program has been in existence and the enrollment history of the program over the past five years.

LWTech's proposed BAS Applied Management - Entrepreneurship program builds on the strength of its applied Associate's degree programs and Basic Education and Academic Core courses.

LWTech has been recently recognized as #1 in the State for Basic Education according to the SBCTC report *BEdA Winter Quarter Performance Report 2015-16*. LWTech is the only college in our system where over 50% of BEdA students demonstrated at least one level gain. LWTech is also a leader in I-BEST, offering every form of this innovative approach to education. I-BEST is a specific component of the two main feeder programs for this degree, Accounting and Business Technology. Those programs were early adopters of the I-BEST model.

LWTech's Academic Core division supporting certificate, applied associates, transfer associates, and baccalaureate education is equally strong. LWTech offers a comprehensive set of college level courses which are accepted in transfer by major universities, and whenever possible include course from the SBCTC common course numbering (CCN) list. LWTech offers over 80 of these courses. LWTech is unique in workforce education in that all of its Applied Associate of Science

(AAS) degrees require a 20 credit distribution of college level academic coursework. Over 60% of full time faculty in the Academic Core division have Doctoral or terminal Master's degrees.

The Accounting and Business Technology programs began when LWTech entered the system in 1991 and offer the Associate of Applied Science degree. Additional programs where students have entrepreneurial interests include Automotive Repair, Culinary Arts, Environmental Horticulture, Fitness, Machining, and Welding. These programs provide a strong enrollment base for the BAS AME degree.

5 Year Enrollment (annualized FTES)

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	2012/13	2013/14	2014/15	2015/16	2016/17
Accounting	33.29	36.47	37.76	38.87	48.04
Automotive Repair	75.20	64.04	69.18	62.87	60.84
Business Technology	69.82	61.69	59.42	57.47	59.31
Culinary Arts	79.76	73.49	67.89	76.08	60.44
Environmental Horticulture	55.56	44.64	43.47	38.78	36.11
Fitness	34.44	27.82	28.84	30.42	21.13
Machining	46.76	57.78	59.40	62.51	51.03
Welding	68.02	92.73	118.16	82.39	97.02

Statement of Need - Criteria #5

5.	Student demand for program within the region.	Evidence of student interest and demand from multiple sources, such as but not limited to: students graduating with technical associate degrees in the region, survey of students within region, demand in excess of opportunity to enroll in related traditional bachelor's programs, and changes in industry standards. Include enrollment projections for each year over the next five years.
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LWTech conducted a survey in Winter quarter 2018 of students currently enrolled in our Accounting, Business Technology and other possible feeder programs. The survey was directed primarily at second year students enrolled in 6th quarter or capstone courses. The results demonstrate a level of interest sufficient to support sustainable enrollment in the proposed BAS Applied Management-Entrepreneurship program. A larger group of students seeking a relevant Applied Associate's degree were surveyed in Summer quarter 2018, and an equally proportional large number of students indicated they would be highly or somewhat likely to enroll in the BAS-AME program.

The results are tabulated below.

How likely would you be to enroll in a new Bachelor's degree program in Applied Management-Entrepreneurship at LWTech?		
	Winter 2018	Summer 2018
Highly likely	20	37

Somewhat likely	37	65
TOTAL	57	102

Students were asked to comment on the need at LWTech for a degree like the BAS AME. Representative student responses include:

- -Teaching students the ability to create their own path is crucial, and being a technical college, direct training into the application of "being their own boss" seems like a logical next step.
- -I would like to study my Bachelor degree at LWTech due to the great college atmosphere, affordability and opportunities.

Students were also asked to comment on the one or two most important factors that would encourage them to enroll in LWTech's BAS AME program versus other options. Representative student responses include:

- -Hands on training and money.
- -LWTech is a great college. The atmosphere and help is much, much better than a community college.
- -Night class schedule. Affordability.
- -Affordability and familiarity to the college resources for students.
- -The cost of the program and if it is online or in class. The amount of days that I would have to drive to get to school. I live in Des Moines and drive time is crucial in making that decision.
- -I am currently studying to be a personal trainer, so in a way, I will be working for myself. Learning these skills would be invaluable, but affordability and applicability are the most direct factors.

The students' comments align well with many of LWTech's strengths including affordability, evening schedule for most of our BAS degrees, outstanding student support services, free parking, commitment to Open Education Resources (OER) to provide zero or low cost course materials, expertise in the hybrid course format, and our signature hands-on teaching style. LWTech is also committed to maintaining an industry-based advisory committee for all BAS programs even though that is not a state requirement. Doing so ensures our BAS programs are interlocked with the local economy and the baccalaureate technical coursework has the highest level of applicability to the workplace.

Based on the strength of the survey results, projected enrollment numbers are as follows:

	2020/21	2021/22	2022/23	2023/24	2024/25
FTES	15	30	40	50	50

In addition to currently enrolled students at LWTech and recent alumni of its applied associate's degree programs, LWTech would welcome entrepreneurial-minded graduates from other institutions.

Statement of Need - Criteria #6

6. Efforts to maximize state resources to serve placebound students.

- •Describe how program will serve place-bound working adults.
- •Identify similar program offered by public or independent institutions in the region.
- •Describe options that have been explored for collaboration with other public baccalaureate institutions, businesses, and /or community organizations considered in the development of the proposal and include a brief description of initial conversations.
- •Describe collaboration with similar CTC BAS programs and related CTC Centers of Excellence.
- •Describe unique aspects of the proposed program that differentiate it from similar programs and/or describe why expansion would be desirable or necessary.

Serving place-bound working adults

Place-bound for LWTech students revolves around traffic and the unaffordability of housing in Kirkland. In the comments section of our survey, students remarked on the weariness they feel coping with traffic in the Puget Sound region. Several students commented they hope the BAS degree will include on-line and hybrid content to reduce the time they spend on the road. Many also intend to work and pursue the BAS, so flexibility with their work schedule is desired. LWTech will design its BAS AME program with these points in mind.

Affordability

The cost of college is a very important consideration for LWTech students. Students remarked tuition affordability is 'very important' if not 'crucial' to the decision to enroll. LWTech will serve cost sensitive students, for whom tuition at the more expensive 4-year universities becomes a barrier to landing a high-paying job. The BAS AME tuition schedule increases the affordability of the degree compared to options at most local universities. Additionally, LWTech has initiatives to help mitigate college expenses. Our biggest is a commitment to expand our utilization of Open Educational Resources (OER) to provide no or low cost course materials. LWTech will soon offer the first transfer Associate's degree using 100% OER materials, the pre-Biology DTA, and will grow from there.

Collaboration with other colleges and industry

The other colleges in our greater service area that offer baccalaureate degrees directly related to our Applied Management-Entrepreneurship proposed degree are:

College	Program
Green River College	Marketing & Entrepreneurship (BAS)
University of Washington – Seattle	Business Administration – Entrepreneurship option (BA)

LWTech contacted Green River College, the closest program to LWTech that is similar to our proposed degree program. GRC's program includes a Marketing and Product Introduction focus, whereas LWTech's degree will focus on small business management or self-employment as a sole practitioner. Our intention is to avoid Green River's program focus and partner together on issues of common interest to faculty and students.

LWTech intends to promote to BAS AME graduates the statewide articulation agreement with WGU for BAS programs as a low friction option to obtain a graduate degree in Business. Other graduate pathways are open including the graduate business programs at nearby UW Bothell.

LWTech has had conversations with Dr. Julie Bonner, Chair of the MS-ITAM program at CWU regarding graduate program articulation. This program with its new Flex-IT format will be a good match for LWTech BAS-AME graduates. CWU is currently reviewing its articulation agreement approval process, but will consider a proposal to create a pathway for LWTech graduates if the BAS-AME degree is approved.

LWTech maintains strong ties to the local professional community through industry-based Advisory Committees. The Accounting and Business Technology Advisory Committees provide educational, industry, graduate, faculty and student experience input. The program works closely with the Academic Core and Allied Health divisions and the college leadership to insure communication is flowing both ways with active participation. The advisory committee provides consultation to the Business programs faculty and has been instrumental in advising on best practices for the program.

Differentiation

LWTech's program will focus on preparing graduates of applied associate's degree programs that are technical in nature to strike out on their own as a small business owner or sole-practitioner working as a contractor/consultant. Other baccalaureate degree options focus on management of specific domains, like Marketing, or on managing innovation, often with an information technology-related focus. Many of these programs build from a lower division pre-Business major foundation. LWTech's program will be more "upside-down" offering coursework in the functional areas of Business inside the degree, rather than as a pre-requisite. That is, our program design will avoid the "bridge" coursework often required of Applied Management BAS degrees in Washington State. Students will be able to enter directly with just their professional-technical coursework and the academic coursework required for their applied Associate's degree. LWTech's program will be taught using our signature hands-on approach. Students will develop a business plan based on their unique interests and work on that as a capstone project across the curriculum. Our graduates will exit with a plan to build their own career and future.

Conclusion

Lake Washington Institute of Technology proposes to offer the Bachelor of Applied Science Applied Management-Entrepreneurship degree. The proposed program supports the Institute's mission, goals, and strategic plan, as well as statewide education plans. The demand for trained managerial professionals statewide is consistent. The proposed BAS AME program is built from LWTech's strong base of its existing programs and strong Academic Core and Basic Education curriculum. Current students are interested in pursuing the BAS AME, and eager to enroll. The attributes of the proposed BAS AME program serve the unique needs of students enrolled at the state's only public Institute of Technology better than alternatives. These students want to create a self-directed career built on their technical skills learned in their applied associate's degree program. LWTech is ready to provide this needed student pathway to produce more baccalaureate-prepared candidates for managerial and entrepreneurial careers.