Date: March 9, 2020

To: Cathy Sandeen, Chancellor

From: John Stalvey, Interim Provost

Cc: Karen Markel, Dean, College of Business and Public Policy
            Bogdan Hoanca, Department Chair and Professor of Management Information Systems
            Susan Kalina, Vice Provost for Academic Affairs
            Claudia Lampman, Vice Provost for Student Success

Re: **AY20 Expedited Program Review Findings – Business Computer Information
            Systems AAS**

I have reviewed the dean's findings and the completed Expedited Program Review Template for the
Business Computer Information Systems AAS. The Provost's Office did not receive an Optional Program
Response Form from the program.

Recommendations

My recommendation is to change the recommendation to revision, accepting the recommendations of
the dean with the additional commentary that the program must revise the curriculum to include 100-
and 200-level courses and develop 100- and 200-level courses appropriate to an AAS. The revision is to
be completed in AY21 for implementation in fall 2021, or a request to delete the program after
admissions are suspended and teach out is complete will be submitted. An interim progress report on all
recommendations is due to the dean by March 1, 2021. The dean will submit a review along with the
program's interim progress report to the provost by April 1, 2021. Unless otherwise noted at that time, a
follow-up Program Review will be conducted in AY24.

Decision

Recommend Revision

College of Business
and Public Policy
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Date: February 24, 2020

To: John Stalvey, Interim Provost

From: Karen Markel, Dean, College of Business and Public Policy

Cc: Bogdan Hoanca, Department Chair and Professor of Management Information Systems

Re: AY20 Expedited Program Review Findings

Program/s in this review:

AAS Business Computer Information Systems (BCIS)

Specialized accrediting agency (if applicable):

N/A

Campuses where the program is delivered:

UAA

Members of the program review committee:

- Bogdan Hoanca, Department Chair and Professor of Management Information Systems, UAA

1. **Centrality of Program Mission and Supporting Role**

The AAS BCIS program prepares students for general entry-level positions in Information Technology (IT) fields and is also an entry point for students who would like to explore a management career in the field. Employers in Alaska value the versatility of AAS BCIS students. The AAS BCIS program is based entirely on courses that are part of the BBA MIS program and attempts serves the local Anchorage business community by meeting workforce demands. As noted by the program review committee employers value the versatility of AAS BCIS students and are a better fit for a wider range of IT-related jobs than the graduates of other more technology-focused AAS programs in the state.

2. **Program Demand (including service to other programs), Efficiency, and Productivity**

There is a shortage of qualified IT professionals in Alaska and nationwide and faculty frequently receive requests from employers needing to fill positions. The AAS BCIS degree program efficiency and productivity needs improvement. While the workforce demand is high, students seeking the degree often drop out because they receive fulltime job offers in the industry.

3. **Program Quality, Improvement and Student Success**

The AAS BCIS degree program is designed to ensure that students have a strong foundation in understanding the IT field. The AAS BCIS degree program serves a distinct career interests; however, student retention is a challenge. The AAS BCIS degree program needs to become more efficient, increasing enrollment and retaining students.

4. **Program Duplication / Distinctiveness**

There is no similar program at UAA or in Alaska. Programs at UAS and UAF with a technology tend to rely on online courses. The AAS BCIS degree program is about technology; however, there is also an incorporation of hand-on experience in a face to face class.

5. **Commendations and Recommendations**

Although this is the only program of its kind in the state, there are currently insufficient resources and enrollment is in declined. As noted by the program review, students often get hired before program completion which may be an indication that this degree may not be necessary for career success in the field. The current structure of the program forces course offerings with very few students making continued support challenging given current staffing and resources available in the college. The program should work to improve efficiency measures to through course caps and streamlined scheduling of courses required for the program. The recommendation is to develop a more detailed timeline of when actions/tasks will occur in order to conduct an AAS BCIS program needs assessment to identify recruiting and retention efforts as well as ways to meet industry demand. Opportunities could include developing 100- and 200- level courses more commonly included in AAS degree programs. New outreach activities should be developed, implemented and assessed to determine what new resources are needed to grow enrollment. Based on the program review submitted in Spring, 2019 there does not appear to be much progress on the action items that include new recruitment efforts and curriculum review. Lastly, does the AAS BCIS degree program make sense to have in the College of Business and Public Policy or is it better suited for the Community and Technical College whose focus is on the associate degrees and technical training? Faculty focused solely on teaching and workforce development could better serve the students. With thoughtful consideration this program has the potential to grow and serve a much needed Alaska skill set, however, the program needs to be reviewed with resource allocation and community input in mind.

6. **Decision**

Continued Review: Program is required to address specific issues and to undergo another review within the next two academic years.

Submission date: February 9, 2020

Program/s in this review: Business Computer Information Systems AAS (AAS BCIS)

Specialized accrediting agency (if applicable):

Campuses where the program is delivered: Anchorage

Members of the program review committee:

- Name, Title, campus

1. **Centrality of Program Mission and Supporting Role (700 words or less)**

Relevancy
The AAS BCIS program prepares students for general entry-level positions in Information Technology (IT) fields and is also a gentler entry point for students who would like to explore (but are not certain they want to pursue) a management career in the field. The AAS BCIS program focuses on business fundamentals, as well as on databases, systems analysis, and other IT areas, in addition to infrastructure. Employers in Alaska value the versatility of AAS BCIS students. As technology has become integral to business, program graduates understand equally well technology, business, as well as their interplay. Because AAS BCIS students are exposed to business and communications courses, they tend to be a better fit for a wider range of IT-related jobs than the graduates of other more technology-focused AAS programs in the state.

The AAS BCIS program is based entirely on courses that are part of the BBA MIS program. This offers several benefits and poses several challenges, described in more detail in section 3 below.

Supporting other programs
As the relatively easier entry point for the BBA MIS program, the AAS BCIS program allows students the option of experimenting with college-level coursework and the option of graduating with only a two-year degree, rather than having to expend the effort and meet the challenges of a four-year degree. Because essentially all AAS BCIS courses count towards the BBA MIS degree, students who pursue the AAS can continue on to the BBA with no loss of credit hours.

Specific workforce development and employment opportunities
The AAS BCIS program prepares students for a variety of in-demand IT-related jobs. In some cases, it is more favorable for an employer to hire a graduate of the AAS BCIS program than a graduate of the BBA MIS program, as the AAS graduate has some of the same basic knowledge as a BBA graduate but is at an earlier stage in their career and commands a lower salary. While many or most employers require skills that are developed in BBA courses, some specialized skills will still require additional training on the job. As such, the solid basic skills and the lower salary expectations of the AAS graduates allow employers to acquire staff with a solid foundation in IT, at a more affordable salary level.

Sources of funding for the program
The ISDS faculty members are developing a partnership with local employers and K-12 education to foster closer ties. Through the newly re-formed ISDS Advisory Board, employers are invited to play a stronger role in defining the AAS program student learning outcomes, to ensure BCIS graduates are even better matched to the Alaskan employers' needs. Through this partnership, employers will have the incentives to host internships and part-time positions to attract more students into the program and will design co-op opportunities that will allow students to gain hands-on skills even before they graduate. This partnership will also foster closer ties between the university and school districts to expose more Alaskan students to technology opportunities and provide pathways to technology careers – driving meaningful enrollment and giving Alaskan talent the opportunity to stay in-state. Recognizing that thriving partnerships require time, energy, and focus, the Information Systems and Decision Sciences (ISDS) department requires a dedicated faculty member who can focus on the AAS program. In 2017 the ISDS department lost a vital faculty member who was promoting a thorough redesign of the program. After the departure of this key champion faculty member, no other faculty member

has had the resources to step in. This is because over the past 14 years the ISDS department has only hired one new faculty member, while losing several to retirement and competition. The number of ISDS faculty members will have dropped from a high of ten to a low of three (anticipated for next year). Consequently, efforts to enhance the existing AAS BCIS program have been placed on hold, as have the more ambitious plans for the partnerships described above.

With the planned hire of a term faculty member who will support the AAS program and with a small amount of marketing funding, it is possible to increase enrollment to the point where the program is able to meet the Alaskan employers' ever-growing needs.

2. **Program Demand (including service to other programs), Efficiency, and Productivity (7 year trend; 1400 words or less)**

Despite the lack of a marketing budget and with only a skeleton-staff for the last few years, the AAS BCIS program has continued to receive positive accolades from employers and past-students who attribute their success to the program. Three initiatives are likely to lead to a healthy increase in the number of students enrolled:
*   Partnership with local employers to better align curriculum and to create internship and co-op opportunities to attract more students
*   Partnerships with school districts to raise awareness of in-state technology opportunities and provide tangible pathways to post-secondary education and ultimately fruitful careers.
*   Partnership with the College of Engineering to recruit from the many students who withdraw from the more demanding programming classes in the BS CS/CSE programs. Engineering does not offer a two-year degree related to CS/CSE, so students unable to complete the BS would be well served by the AAS BCIS.

The years-per-degree figure is highly variable because of the small number of students in the program. A high of 16.0 years per degree in 2014 is clearly an outlier, while most other years range from 4-8 years per degree. This length, more commensurate with a four-year degree, is likely influenced by two factors. First, a significant number of BCIS students are gainfully employed or enter the workforce part-time while perusing their BCIS degree, requiring flexible class schedules and longer graduation windows to sustain a healthy work/life balance. Second, many of the AAS BCIS graduates declare the AAS major once they are ready to graduate with their BBA MIS degree, since they already meet the requirements for the AAS by the time of graduation with their BBA.

Despite limited word-of-mouth advertising and severe staffing attrition, enrollment has been trending flat and steady. To achieve a target enrollment of 50 students in eight years we will strategically market towards secondary education, workforce retraining programs, and career development. We will also hire a dedicated faculty member to focus on enrollment and establishing mutually beneficial partnerships with hiring employers.

AAS BCIS students pass courses at the same rates as BBA MIS students. The courses are challenging, but the pass rate is high. Students are either passionate about the topic and strive to do well or they change major to a less-demanding degree.

The courses for the AAS BCIS tend to be only for majors. Because courses are highly technical and they have challenging prerequisites, not many students from outside the major will take AAS BCIS classes. Some of the students who minor in MIS will take classes that are part of the AAS BCIS, although those numbers are relatively low for now.

The instructional productivity includes both AAS BCIS and BBA MIS courses, as they cannot be easily separated. The downward trend mirrors the general downward trend in the nation (fueled in part by demographics) and at UA (fueled in part by the series of budget cuts in recent years).

As for the Student Credit Hour (SCH) data, SCH/FTEF include both AAS BCIS and BBA MIS courses, as they cannot be easily separated. The trend line appears flat or slightly decreasing, but the impact of the high turnover in the department (four faculty members departed within the past three years) and the irregular workloads (including several administrative

assignments – department chair, interim dean, and director of graduate programs) are difficult to untangle from any other factors that might impact the trend.

The enrollment per Full Time Equivalent Faculty (FTEF) is also on a slightly decreasing trajectory, with fluctuations due to the relatively small number of students enrolled. Again, the figure combines both BBA MIS and AAS BCIS students, but it shows a healthy number of students per FTEF.

The FTES/FTEF ratio of full time equivalent students to full time equivalent faculty is driven by the need to have small classes for the upper division electives. While the figures above are averages, the actual elective class size tends to be smaller, sometimes even in single digits. This low enrollment is partly due to the small size of the program itself and partly due to the highly specialized nature of some of the electives, which attract a small section of the students in the program.

While the tuition revenue per student credit hour (SCH) is lower than the tuition cost per credit, probably due to the impact of scholarships and waivers, the tuition revenue fluctuates around the cost per SCH. In recent years, tuition revenue appears to be exceeding the cost, although it is not clear if this is a fluctuation or a trend, let alone a trend that will continue.

Despite insufficient staffing, no advertising, no external recruitment, and limited community engagement, the AAS BCIS program has successfully fulfilled the UA mission at a net profit: BCIS graduates are actively recruited by local employers for profitable careers in Project Management and Business Analytics. Although the enrollment and graduation figures for the AAS BCIS are not indicative of the true value of the program, there is sustained demand for BCIS graduates and ample positive community feedback on the efficacy of the program. Moreover, the cost of the sustaining the AAS BCIS program is minimal, as it requires no additional courses that are not already part of the BBA MIS program.

3.   Program Quality, Improvement and Student Success (1500 words or less)

The AAS BCIS program quality is high, possibly even too high for a two-year program. As hinted above, AAS BCIS students take a subset of the same courses BBA MIS students take, including many courses at the upper division level. As such, AAS BCIS graduates have strong skills across a wide range of business topics and are in high demand by local employers. Thus, the program has a unique combination of benefits and challenges.

Benefits:
•   Economies of scale: The AAS BCIS requires essentially no additional resources to teach the courses, beyond the already existing faculty for the BBA MIS
•   Good match for employers' needs: The AAS BCIS prepares students for some of the most common IT jobs in the Alaskan metropolitan job market. Technology continues to function as a competitive differentiator, integral to efficiency and modern operations. Thus, employers regularly recruit AAS BCIS students and graduates alike, because of the growing demand for well-trained professionals who can bridge the gap between business and technology.
•   High quality education: AAS students are exposed to a more rigorous set of courses, primarily upper division core courses and electives, from the same set, but in a smaller number than the coursework for BBA MIS students. The AAS BCIS program provides a path for graduates to continue on to the BBA MIS or to directly enter the workforce at a competitive wage. Because the skills obtained in this program are applicable to a variety of IT jobs, graduates are marketable to a wide range of industries. Graduates who complete the AAS BCIS and choose to further their career progression by pursuing a BBA MIS can do so with no loss of course credit

Challenges:
•   Affordability: The AAS BCIS program ends up being more challenging and more expensive (requiring more upper division courses) for students than a typical AAS, although it is clearly less expensive and less challenging than the BBA MIS.

•   Recruitment: Without a marketing budget and support staff, it is difficult to expose Alaskan students to technology opportunities and provide pathways to technology careers – driving meaningful enrollment and giving Alaskan talent the opportunity to stay in-state. Because the program uses similar courses as the BBA MIS, it is difficult to recruit students into the AAS BCIS, unless those students have abilities and possibly the interest in pursuing the BBA.

•   Accountability: The financial metrics (Section 2) for the AAS and BBA are intertwined, so it is difficult to evaluate the two programs separately. That said, with no current dedicated program champion, there are no resources available to focus on community engagement with hiring employers, recruitment efforts within school districts, or marketing of the program within the UA system to maximize the profitability and output of the BCIS program.

The challenges mentioned earlier have been hampering the program enrollment and growth. Lack of faculty to champion the program has prevented a major redesign of the program from moving forward. Lack of faculty to market, recruit and mentor students has led to low enrollment. A challenging and relatively expensive (for students) set of courses has further discouraged students from pursuing this degree. In effect, the degree as designed offers AAS students a sampling menu, an assortment of the same courses that BBA students take to get an AACSB accredited four-year degree, even though AACSB does not recognize and accredit two-year degrees. With a dedicated faculty champion, the program redesign that has been stalled since 2017 would have to address these challenges, by broadening the course offering to include additional lower-division courses, with the corresponding lower tuition and lower intellectual challenge for students pursuing the AAS program. This redesign is likely to increase recruitment into the program, while also providing a pipeline into the BBA MIS program.

4.   Program Duplication / Distinctiveness (300 words or less)

There is no similar program at UAA or elsewhere in the state, including private institutions. Programs at UAS and UAF with a technology bend tend to be less rigorous and to rely on online courses. Even though the BCIS program is about technology, hand-on experience in a face to face class leads to better quality education, even more since AAS students work side by side in the same classes as BBA MIS students. At UAA, the breadth of the AAS BCIS program distinguishes it from the AAS CNT program, which, as stated earlier, is primarily focused on computer hardware, maintenance and networking. The AAS BCIS program includes one computer networking course which is a condensed version of the AAS CNT program, with a business focus and for a more managerial audience, but still with considerable technical depth. In the AAS BCIS courses, students learn about technology in a business context, combining both technical issues and business considerations. Students prepare for a wide variety of IT-related jobs, some related to computer hardware and networking, but many others requiring a diverse set of skills, as well as general and vendor-independent understanding of computer concepts. In contrast, the AAS CNT courses deal primarily with the nuts and bolts of networking, with the stated goal of preparing students for an industry-standard certification (primarily for Cisco products). Further analysis of potential articulation between the CNT program and BCIS program can be made with the hiring of a dedicated BCIS program faculty manager.

At the other end of the spectrum, the BS CS/CSE courses are even more technical than the AAS BCIS, have challenging prerequisites and lack a business component. As such, it would be difficult or impossible to leverage courses outside the current degree requirements to expand course sharing into the AAS BCIS program.

5.   Summary Analysis (500 words or less)

Meeting student and employer needs
As a shorter program than the BBA MIS and as a program with a potentially higher percentage of lower division courses, the AAS BCIS program is also a more affordable option for students. For those students interested in technology-related careers, but who are not sure they want to pursue the more managerial-oriented track of a BBA, the AAS BCIS is the only face to face option in the state. The breadth of the AAS BCIS program affords students many possible career opportunities. With a dedicated faculty resource to optimize the existing BCIS program, it can be better aligned to fulfill

local employer needs. Additionally, the AAS BCIS can provide Alaskan students a more gradual career trajectory to even more competitive wages and more advanced career advancement though the BBA MIS program. The program redesign could still allow BCIS graduates to complete a BBA MIS without loss of course credit

Low cost to UAA
The AAS BCIS program has a low cost, as its courses are already part of the BBA MIS program; this leads to a higher combined efficiency for the two programs. Students who move on to complete a BBA MIS do so without any loss of credit hours.

Conclusion
The AAS BCIS program is an excellent idea that has suffered from lack of funding and support. For many years CBPP deans have hired and funded primarily the more prestigious AACSB-accredited BBA programs, leaving the AAS programs to slowly wither away. While employers actively seek graduates with a general knowledge of IT fundamentals and would like to train these graduates for their specific needs, too few students graduate with AAS BCIS degrees. Instead, many more students pursue BBA MIS degrees which train them for a longer time at a higher cost for positions that often require more work experience and which provide the graduates with more advanced and in-depth knowledge. If marketed correctly, the AAS BCIS program can offer a clear and tangible pathway for graduates and employers to integrate work-experience into career advancement, leveraging the BBA MIS program. This would afford graduates a natural progression-path to higher salaries and compliment employer's training programs with accredited and consistent career preparation, possibly out of reach for some of the local employers or for some types of local IT-related jobs. Given the acute shortage even at the BBA MIS level, the Alaskan employers are less vocal about the lack of AAS BCIS graduates, but it is clear that the program graduates get jobs, stay locally in-state, and meet a real need.