

**Proposal for Strategic Accelerated Review
BS and MS in Accounting
College of Business**

Executive Summary

The Department of Accounting and Finance at UW serves students, the business community, and the state by offering bachelor's and master's degrees in accounting. Accounting program faculty contribute to the strategic goals of the College, as well as the University's newly developed mission of making UW more digital, entrepreneurial, interdisciplinary, and inclusive in the following ways:

- The Master of Science in Accounting is now offered entirely online, and the Bachelor of Science in Accounting is offered both online and on campus. Online access meets the needs of the state's place-bound students as well as the growing number of career changers and professionals who are pursuing the Certified Public Accountant (CPA) designation. With the addition of data analytics courses in both the undergraduate and graduate degree programs, a UW accounting degree provides graduates with critical business skills while adding to the digital literacy of UW degree programs overall.
- Employers and alumni are the largest sponsors and donors to the Department and College. Increasing the availability and quality of Accounting degree programs will enhance the Department's relationships with corporate partners and alumni base, which provides broad support for continued expansion and innovation of the degree programs in an entrepreneurial spirit of identifying new education skills and programs for sustained growth.
- Testimonials from three of Wyoming's largest CPA firms indicate:
 - A high level of satisfaction with the quality of UW Accounting graduates as entry-level professionals
 - A continuing shortage of UW Accounting graduates, forcing these firms to recruit at other area schools, including non-accredited programs
 - A strong desire to see expansion in the number of accounting majors at UW to meet future needs in serving clients throughout Wyoming
- The Accounting program and the Department are making ongoing efforts to increase interdisciplinary education and research. For example, we are pursuing research projects with other units within the College and across the University to provide more opportunities for research faculty and students interested in research.
- The online programs provide access to Accounting education to traditionally under-served populations, such as the Wind River reservation, nontraditional and first-generation college students across the region and country, and outreach to potential international students and partners. Through these efforts, we are creating a more inclusive, supportive, and welcoming environment for diverse groups of constituents.
- The Accounting program fulfills strategic College goals by being a key player in ensuring student success (COB strategic goal #1), advancing world-class research (COB strategic goal #2), serving the state through outreach and engagement (COB strategic goal #3), and growing the quality and reach of online offerings (COB strategic goal #4).

Degree of involvement in outreach

- During the 2019-20 academic year, Acting President Theobald specifically identified UW's accounting programs as having very high potential to increase UW's reach to adult learners in Wyoming by offering online degree programs at the undergraduate and master's level. Our online programs are poised for significant growth in enrollment as online marketing efforts, including social media, are ramping up quickly
- Testimonials from three of Wyoming's largest CPA firms highlight the importance of strong and growing Accounting degree programs at UW.
 - McGee Hearn and Paiz (MHP), LLP, Cheyenne: *As the largest locally-owned accounting firm in Wyoming, MHP prides itself on our ability to serve not only the Cheyenne community, but the entire state of Wyoming. Our ability to provide quality service to our clients is dependent on maintaining a sufficient number of incoming properly educated staff, with an increasing need for a diversified skillset within those incoming staff. MHP values the University of Wyoming as our primary recruiting source for our entry level accountants and strives to support the University through the giving of our time and money.*

Unfortunately, we have only been able to fulfill 50% of our recruiting needs from graduates of the University of Wyoming. MHP looks to the University of Wyoming to continue to be our primary source of those staff and we pledge to continue as a support partner in any way we can to ensure that our Firm and the many others in Wyoming can thrive.

- Lenhart, Mason & Associates LLC, Casper: *We have a firm of about forty full time people at our CPA firm here in Casper. The vast majority of our partners and staff are UW College of Business (Commerce and Industry) graduates. We have recruited very intentionally at UW as we find the quality of the students and the related curriculum are exceptional compared to other regional educational institutions. Additionally, our retention of UW students, particularly those hailing from Wyoming, is higher than the retention from other institutions.*

In recent years, the graduating classes at UW have not fully served our needs for entry level professional staff. So, we have been forced to recruit in other places. Our bottom line is that we will hire a significant number of strong candidates from UW COB in the future, and our need for those students is for more of them than we have successfully hired in the recent past. Accounting will continue to be a discipline in very high demand as it has been for decades.
- Porter, Muirhead, Cornia & Howard (PMCH) CPAs, Casper: *PMCH like many Wyoming businesses is experiencing a shortage of available degreed Accounting professionals. PMCH relies heavily on recruiting Accounting degreed individuals from the University of Wyoming primarily because of the quality of student produced. The UW College of Business has done an exceptional job of developing students and providing them with the knowledge and tools to make a seamless transition from school to career. Without the quality students from the University, PMCH would have to decline services to Wyoming businesses forcing them to seek services outside of Wyoming.*

The message in these testimonials from three of the largest employers of UW Accounting graduates is clear: there is a pressing need to develop new talent in the CPA profession in the state of Wyoming, driven both by demographic trends (the retirement of large numbers of firm partners and owners and the "brain drain" caused by graduates seeking employment outside of

the state) and steady economic growth in Cheyenne and Casper. As the state continues its efforts to diversify the economy, the need for well-trained Accounting professionals is expected to grow at an increasing rate. Thus it is critical to the state's future economic success that UW's Accounting program, the only source of Accounting graduates in Wyoming, be prepared to meet this growing demand by expanding the availability, rigor, and quality of its offerings across the state.

- The Accounting program continues to offer Volunteer Income Tax Assistance (VITA) to Wyoming citizens in filing their Federal tax returns.

Contribution to UW's vision and mission as a land grant university

The Department's on-campus and online Accounting degree programs address Goal 2 of UW's Strategic Plan for Community Engagement: *Inspiring UW students to pursue a productive, engaged and fulfilling life and prepare them to succeed in a sustainable global economy.*

Our online programs in particular address Goal 3 of the outreach strategic plan: *Improve and enhance the health and well-being of our communities and environments through outreach programs and in collaboration with our constituents and partners.*

Expanding UW's accounting degree programs across the state via online access directly addresses one of the charges of the Morrill Act: *to provide a broad segment of Wyoming's population with a practical education that had direct relevance to their daily lives.*

By providing distance education and student engagement across the state, the Department's Accounting programs help improve financial literacy, provide employment opportunities, and enhance career prospects for Wyoming citizens. Virtually all US land grant universities offer both undergraduate and graduate degrees in Accounting and increasingly, these programs are available online.

Curriculum revision and the need for additional faculty resources

The MS Accounting program's primary focus is to providing students with additional coursework to prepare for the CPA examination. Recently, the MSA program has developed a secondary focus on employee and management fraud, including understanding the mindset of the typical fraudster. Coverage of fraud examination provides students with the foundational knowledge necessary for careers as auditors or forensic accountants. Understanding the psychology of fraud increases the likelihood that auditors will recognize the red flags of fraud risk for early detection or prevention of fraud schemes. These skills are in high demand among employers of MSA graduates.

A rapidly emerging area of professional expertise in Accounting is *digital literacy*. This expertise lies mainly in the following two IT-enabled services:

1. *Data analytics* for managing, analyzing, and visualizing both financial and non-financial trends in enterprise data. In Accounting, data analytics are used within organizations to monitor performance, address gaps in strategy and execution, and identify emerging strategic opportunities as well as potential threats. The days of accountants being primarily "bean counters" and record keepers are rapidly coming to an end. Future Accounting graduates will be more in demand for their abilities to work with data to solve problems and advise top management on strategic decisions.

In auditing, data analytics are rapidly becoming a required skillset, similar in impact to the advent of electronic spreadsheets in the 1990s, but much more far-reaching in scope. For example, analytics assist auditors in planning and performing work more efficiently and detecting accounting irregularities and fraud because of the ability to examine 100 percent of the accounting data in an organization.

The Accounting program is currently working to develop stand-alone analytics courses in the BS and MS Accounting programs, as well as integrating analytics education throughout the curriculum. However, the program faces critical faculty resource constraints for adequate development of analytics due to the chronic shortage of Accounting faculty.

2. *Blockchain*. Blockchain technology is literally revolutionizing the financial industry, including accounting. Blockchain is the foundation of the *digital ledger*, in which all details of transactions among parties are publicly available in real time. Not only will blockchain-enabled financial reporting systems improve business efficiency and accountability, but it will also allow auditors to realize the benefits of examining business events and transactions in real time. Enhanced transparency of business processes, and the ability of auditors to detect transaction-based irregularities and fraud on a timely basis, will transform the audit process from the traditional examination of samples after the fact into a powerful force to improve business process reliability.

As with data analytics, the current and future demand for Accounting graduates with blockchain knowledge and skills far outstrips the Department's ability to respond given our shortage of qualified faculty. We hope to leverage UW's investment in the new Center for Blockchain and Digital Innovation to rapidly develop new courses and programs to meet Wyoming's demand for digitally-literate graduates who will be equipped to assist in growing and diversifying the state's economy. These goals can only be met by investing in faculty resources to expand the Department's ability to meet current and future student demand.

Student demand for Accounting degrees

Table 1-1¹ presents Accounting student enrollments in the BS Accounting program for the past three academic years. The data in Table 1-1, provided by the College's Green Johnson Student Success Center, shows a steady increase in BS Accounting students over the past three academic years. The increased enrollment for AY20 reflects the launch of the online BS Accounting degree program, and the preliminary enrollment numbers for AY21 indicates a continuing upward trend.

Table 1-2 presents data on potential student inquiries regarding the MS Accounting program, current MSA enrollment, and MSA degree completion for the academic years 2018 through 2020. The large number of students and graduates in AY 2018 was somewhat of an anomaly; these numbers are 2-3 times the average for the three preceding academic years. Enrollment and graduation numbers for AY 2019 and 2020 reflect small increases over prior year trends. With the program now available exclusively online, and through aggressive marketing and social media promotion by the College's Professional Graduate Degree Office, student awareness of and interest in the online MS Accounting program is growing. We expect historically strong and growing numbers of MSA applications for the remainder of AY 2020 and beyond. Faculty resources to meet

¹ All tables are included in the Appendix to this report.

the increasing demand for Accounting graduate education is another area in critical need of additional investment.

Table 2 presents Gray Associates data on student demand for Accounting degree programs for the market within a 360 mile radius as well as the national market for these programs, both on-campus and online. Gray Associates uses two categories to measure the student demand in a respective area: *Size* and *Growth*. *Size* includes criteria such as inquiry and search volumes and number of completions per period, with Google Search Volume as the leading indicator. *Growth* is measured by year-over-year change in the Size criteria. Percentile values are color-coded to indicate scales.

In line with our experience at UW, both undergraduate and graduate accounting programs are very popular among students, as evidenced by most criteria scoring above the 90th percentile and a student demand score at the 100th percentile in both markets for both program delivery modes.

Industry demand for Accounting graduates

Table 3 shows selected statistics on employment data for Accounting graduates. Information is presented in five categories: size, growth, saturation, wages, and national American Community Survey (ACS) results. Selected criteria for each category are included in Table 3. Percentile values are color-coded to indicate scales. Bureau of Labor Statistics Wages categories and National ACS survey numbers are the same for all markets.

Again the pattern is very clear: there is enormous opportunity for graduates of Accounting programs, including job postings, and current employment statistics are above the 95th percentile. In short, there is high demand and employment statistics in local and national level market for students with an undergraduate or master's degree in accounting.

Student credit hours (SCH) generated per full time equivalent (FTE) faculty

Table 4 presents SCH taught by faculty category for the past three academic years for both the BS and MS in Accounting programs. Table 5 shows the number of FTE faculty in both programs. Note again the critical shortage of FTE faculty in the MS Accounting program. For sustained program viability and growth, and to remain in compliance with AACSB requirements for tenured/tenure track FTE as a percentage of total FTE faculty, the MS Accounting program needs to be considered a top priority for additional faculty investment.

Conclusion

UW's Bachelor of Science and Master of Science in Accounting degree programs provide tremendous service and value to the state of Wyoming with minimal resources. To ensure that these programs continue to meet the future needs of the state's citizens and contribute to Wyoming's economic growth and diversification, additional investment in resources, particularly around adding qualified faculty, is critical.

APPENDIX

Table 1-1. Enrollment in the BS in Accounting program, AY18-AY21

	AY 18		AY 19		AY20		AY21*
	Fall 2017	Spring 2018	Fall 2018	Spring 2019	Fall 2019	Spring 2020	Fall 2020
2 nd Bachelor's	6	3	4	5	11	13	20
Seniors	44	64	81	76	75	75	75
Juniors	46	35	48	34	42	39	59
Sophomores	23	26	28	25	28	37	35
Freshman	33	21	31	21	35	18	10
Total	152	149	192	161	191	182	199
AY Totals	301		353		373		

* AY 21 statistics as of December 2020

Table 1-2. MS in Accounting program inquiries and enrollment, AY 18-AY 21

	AY18	AY19	AY20	AY21*
Number of Program Inquires	19	24	32	37
Active Enrollments	25	28	20	14
Graduates	26	11	16	-

* AY 21 statistics as of December 2020

Table 2. Gray Associates Accounting Student Demand StatisticsPanel A. Undergraduate on-campus: Overall score 45 (100th percentile)

Category	Criterion	Laramie 360		National	
		Value	Percentile	Value	Percentile
Size	Inquiry Volume (12 months)	67	98	9,886	99
	Google Search Volume (3 months)	38,879	98	1,255,137	97
	Completions	753	98	40,976	99
Growth	Inquiry volume YoY Change (%)	5%	36	-22.0%	42
	Google Search YoY Change (%)	8%	68	164%	100
	Completion Volume YoY Change (%)	-7%	39	0%	49
	Student Demand Score	29	100	30	100

Panel B. Undergraduate Online: Overall score 53 (100th percentile)

Category	Criterion	Laramie 360		National	
		Value	Percentile	Value	Percentile
Size	Inquiry Volume (12 months)	377	99	22,887	99
	Google Search Volume (3 months)	38,879	98	1,255,137	97
	Completions	616	99	10,904	99
Growth	Inquiry volume YoY Change (%)	5%	34	31.0%	71
	Google Search YoY Change (%)	8%	100	7%	71
	Completion Volume YoY Change (%)	17%	61	-3%	41
	Student Demand Score	32	100	30	100

Panel C. Graduate on-campus: Overall program score 46 (100th percentile)

Category	Criterion	Laramie 360		National	
		Value	Percentile	Value	Percentile
Size	Inquiry Volume (12 months)	9	99	2,840	99
	Google Search Volume (3 months)	38,879	98	1,255,137	97
	Completions	591	99	12,603	99
Growth	Inquiry volume YoY Change (%)	1%	76	63.0%	87
	Google Search YoY Change (%)	8%	68	7%	71
	Completion Volume YoY Change (%)	-4%	49	-6%	42
	Student Demand Score	30	100	30	100

Panel D. Graduate Online: Overall program score 48 (100th percentile)

Category	Criterion	Laramie 360		National	
		Value	Percentile	Value	Percentile
Size	Inquiry Volume (12 months)	377	99	7,350	98
	Google Search Volume (3 months)	38,879	98	1,255,137	97
	Completions	616	99	6,478	99
Growth	Inquiry volume YoY Change (%)	5%	34	-12.0%	49
	Google Search YoY Change (%)	8%	100	7%	71
	Completion Volume YoY Change (%)	17%	61	0%	49
	Student Demand Score	32	100	30	100

Table 3. Gray Associates Accounting Employment Statistics

Category	Criterion	Wyoming		Laramie 360		National	
		Value	Percentile	Value	Percentile	Value	Percentile
Size	Job Postings Total (12 Months)	155	95	13,589	98	371,645	99
	BLS Current Employment	2,343	97	64,080	98	1,728,449	98
	BLS Annual Job Openings	226	96	6,774	98	178,738	98
Growth	BLS 1-Year Historical Growth	4%	29	3%	44	2%	35
	BLS 10-Year Future Growth	-0.20%	46	0.80%	43	0.6%	45
Saturation	Job Postings per Graduate	1.8	40	6	64	5.2	79
	Job openings per Graduate	2.8	55	3	66	2.4	82
Wages	BLS 10th Percentile Wages	\$43,969	65	\$40,060	65	\$41,476	64
	BLS Mean Wages	\$77,433	79	\$71,809	73	\$71,328	66
National Survey	National ACS Wages (Age <30)	\$54,690	84	\$54,690	84	\$54,690	84
	National ACS Wages (Age 30-60)	\$109,757	82	\$109,757	82	\$109,757	82
	National ACS % Unemployment. (Age < 30)	2%	22	2%	22	2%	22
	Employment Score	12	100	19	100	19	100

Table 4. Student credit hours taught by Full Time Equivalent (FTE) faculty by category**Panel A. BS Accounting, AY 18-AY 20**

	AY 2018		AY 2019		AY 2020	
Tenured/Tenure-track	1,443	28.6%	988	22.2%	1,395	32.3%
Lecturer	3,489	69.2%	2,935	65.9%	2,921	67.7%
Part-time	111	2.2%	531	11.9%	0	0.0%
Total	5,043		4,454		4,316	
SCH taught per FTE faculty	448.4		435.9		431.6	

Panel B. MS Accounting, AY18-AY20

Tenured/Tenure-track	496	91.2%	388	95.1%	115	59.9%
Lecturer	18	3.3%	20	4.9%	47	24.5%
Part-time	30	5.5%	0	0.0%	30	15.6%
Total	544		408		192	
SCH taught per FTE faculty	73.4		58.3		40.5	

Table 5. Number of FTE Accounting faculty, AY 18-AY 20**Panel A. BS Accounting**

	AY 2018	AY 2019	AY 2020
Tenured/Tenure-track	7	6	6
Lecturer	4	3	4
Part-time	2	4	0
Total FTE	11	9	10

Panel B. MS Accounting

Tenured/Tenure-track	6	6	3
Lecturer	1	1	1
Part-time	1	0	1
Total FTE	7	7	4