

894: BUSINESS ANALYTICS AND APPLIED AI GRADUATE MAJOR (MS)

In Workflow

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9. 7 Day Review (none)
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Approval Path

1. Mon, 03 Mar 2025 21:48:25 GMT
Janice Nave-Abele (Curriculum Management, Curriculum Coordinator) (janice.nave-abele): Approved for Curriculum Management Programs
2. Fri, 14 Mar 2025 01:29:32 GMT
Belinda Sykes (Office of the Registrar, Catalog & Curriculum Coordinator) (belinda.sykes): Approved for Catalog Coordinator
3. Fri, 14 Mar 2025 16:17:18 GMT
Prem Mathew (College of Business, Associate Dean of Undergraduate Programs) (prem.mathew): Approved for 02 Dean Designee
4. Fri, 14 Mar 2025 16:35:26 GMT
Alix Gitelman (Vice Provost for Academic Affairs) (alix.gitelman): Approved for Provost Designee
5. Fri, 14 Mar 2025 17:01:59 GMT
Colleen Bee (College of Business, Associate Professor) (colleen.bee): Approved for MAD Head
6. Mon, 17 Mar 2025 20:14:30 GMT
Kathryn Howard (Ecampus, Program Intake Coordinator) (kathryn.howard): Approved for Ecampus Programs
7. Thu, 27 Mar 2025 16:26:14 GMT
Taylor Ralph (Libraries & Press, Collections Assessment Librarian) (ralpht): Approved for Library Evaluation
8. Thu, 27 Mar 2025 16:43:56 GMT
David Jacobs (Capital Planning & Development, Manager - Space Allocation) (david.jacobs): Approved for Space Evaluation
9. Fri, 04 Apr 2025 08:33:09 GMT
0/1 votes cast.
Yes: 0% No: 0%
Approved for 7 Day Review

10. Fri, 16 May 2025 16:22:02 GMT
John Becker-Blease (College of Business, Associate Dean of Graduate Programs, and Graduate Council Chair) (john.becker-blease): Approved for beckerbj
11. Fri, 16 May 2025 16:29:12 GMT
Kristin Nagy Catz (OSU Director of Assessment) (kristin.nagycatz): Approved for Graduate Assessment
12. Tue, 10 Jun 2025 14:40:15 GMT
Prem Mathew (College of Business, Associate Dean of Undergraduate Programs) (prem.mathew): Approved for 02 College Committee Approver
13. Tue, 10 Jun 2025 20:34:35 GMT
Janice Nave-Abele (Curriculum Management, Curriculum Coordinator) (janice.nave-abele): Approved for Curriculum Management Programs
14. Wed, 11 Jun 2025 16:56:27 GMT
John Becker-Blease (College of Business, Associate Dean of Graduate Programs, and Graduate Council Chair) (john.becker-blease): Approved for beckerbj
15. Fri, 20 Jun 2025 19:14:50 GMT
Jonathan Fram (College of Earth, Ocean & Atmospheric Sciences, Associate Professor) (jonathan.fram): Approved for Budgets and Fiscal Planning Committee Chair
16. Mon, 20 Oct 2025 17:58:55 GMT
John Becker-Blease (College of Business, Associate Dean of Graduate Programs, and Graduate Council Chair) (john.becker-blease): Approved for Graduate Council Co-Chairs
17. Mon, 10 Nov 2025 20:52:41 GMT
Janice Nave-Abele (Curriculum Management, Curriculum Coordinator) (janice.nave-abele): Rollback to Graduate Council Co-Chairs for Curriculum Management Programs
18. Wed, 12 Nov 2025 18:51:19 GMT
John Becker-Blease (College of Business, Associate Dean of Graduate Programs, and Graduate Council Chair) (john.becker-blease): Approved for Graduate Council Co-Chairs
19. Wed, 12 Nov 2025 21:51:28 GMT
Janice Nave-Abele (Curriculum Management, Curriculum Coordinator) (janice.nave-abele): Approved for Curriculum Management Programs
20. Tue, 18 Nov 2025 21:44:57 GMT
Jim Coakley (College of Business, Associate Professor, and Curriculum Council Co-Chair) (jim.coakley): Approved for Curriculum Council Co-Chairs

New Program Proposal

Date Submitted: Mon, 24 Feb 2025 00:48:53 GMT

Viewing : Business Analytics and Applied AI Graduate Major (MS)

Last edit: Wed, 12 Nov 2025 18:16:21 GMT

Changes proposed by: beckerbj

Proposal

Effective Term

Summer 2026

Justification

The College of Business (COB) is proposing a new Master of Science in Business Analytics and Applied AI (MSBAAI) that will meet the emerging needs of industry to integrate AI and analytics to address pressing business challenges. The MSBAAI combines existing business analytics coursework with two newly developed courses that more deeply explore the intersection of applied AI and business analytics to provide students with the necessary skills to integrate analytics and applied AI into several business functions. The degree is designed to encourage cross-disciplinary coursework to permit students to customize their applied AI and analytics skills to a range of business functions and industries.

Primary Originator

Name

John Becker-Blease (College of Business, Associate Dean of Graduate Programs, and Graduate Council Chair)

Liaisons

Academic Unit

College of Business - Graduate (BA)

School of Marketing, Analytics & Design (BANA, DSGN, MRKT, SB)

School of Accounting, Finance & Information Systems (ACTG, BIS, FIN)

School of Management, Entrepreneurship & Supply Chain (MGMT, SCLM)

College of Engineering - Graduate (ENGR, OP)

School of Electrical Engineering & Computer Science (AI, CS, ECE, SE)

School of Civil & Construction Engineering (ARE, CE, CCE, CEM, EMGT)

School of Mechanical, Industrial & Manufacturing Engineering (AAE, ESC, ESE, HEST, IE, MATS, ME, MFGE, MIME, ROB)

Environmental Sciences - Graduate (ENSC)

Forest Ecosystems & Society - Graduate (FES, MNR, SNR)

Geography - Graduate (GEOG)

School of Psychological Science (PSY)

College of Science - Graduate (SCI)

Statistics (ST)

Program Information

Program Level

Graduate

Program Type

Major / Degree

Name

Business Analytics and Applied AI Graduate Major (MS)

CIP Code

307102 - Business Analytics.

College

Business (02)

Academic Unit

School of Marketing, Analytics & Design

Is this program jointly administered?

No

Date the Early Alert was submitted for this proposal

May 15, 2024

What degree types are available for this graduate or professional program?

Master of Science (MS)

Campus Locations

Corvallis

Ecampus

Is this program currently or planned to be offered in hybrid format?

No

Will this program lead to professional licensure in any U.S. state or territory?

No

Does this program use an alternative admissions process or have grade/GPA standards that are different from the university or college minimum?

No

Program Relationships

Are all degree types and options (if applicable) available at all locations?

Yes

Does this major have options?

No

Executive Summary**Executive Summary**

The Master of Science in Business Analytics and Applied Artificial Intelligence (MSBAAI) is a 45-credit STEM-designated graduate degree providing students with the specialized knowledge and skills at the intersection of business intelligence, data analytics, and AI technology. Students will learn to harness sophisticated analytics tools and AI algorithms to interpret complex data, derive actionable market insights, and make data-driven decisions that enhance business strategies and operations. The curriculum includes core courses in machine learning, statistical analysis, "big data" management and technologies, predictive modeling, and data visualization and communication. A wide range of electives allow students specialized concentrations in core business disciplines such as finance, information systems, supply chain, and marketing as well as more interdisciplinary areas such as Environmental Management. The degree culminates in a non-thesis project or capstone where students apply the skills and knowledge developed in the program to solve a current real-world business challenge.

The degree is available both in Corvallis and through Ecampus and can be completed in as few as three full-time terms. The curriculum also works well for part-time students and students seeking to "stack" graduate certificates (e.g. Business Analytics, Environmental Management, Business Fundamentals, Supply Chain & Logistics Management) into a Masters' degree. Admission is open to applicants from any disciplinary background who meet Graduate School admissions standards. The degree prepares students for a very wide range of careers as a business intelligence analyst, data scientist, AI product manager, operations research analyst, customer insight analyst, supply chain manager, or risk management analyst.

HECC - Higher Education Coordinating Commission**Program Description****HECC Description**

The Master of Science in Business Analytics and Applied Artificial Intelligence (MSBAAI) is a 45-credit STEM-designated graduate degree providing students with the specialized knowledge and skills at the intersection of business intelligence, data analytics, and AI technology. Students will learn to harness sophisticated analytics tools and AI algorithms to interpret complex data, derive actionable market insights, and make data-driven decisions that enhance business strategies and operations. The curriculum includes core courses in machine learning, statistical analysis, "big data" management and technologies, predictive modeling, and data visualization and communication. A wide range of electives allow students specialized concentrations in core business disciplines such as finance, information systems, supply chain, and marketing as well as more interdisciplinary areas such as Environmental Management. The degree culminates in a non-thesis project or capstone where students apply the skills and knowledge developed in the program to solve a current real-world business challenge.

Brief overview of the proposed program, including its disciplinary foundations and connections; program objectives; programmatic focus; degree, certificate, minor, and concentrations offered

The MSBAAI is a 45-credit STEM-designated Master of Science degree where students may select a concentration in business fundamentals, supply chain, marketing, finance, information systems, and environmental management or pursue a more customized concentration from a wide selection of electives. The required courses are concentrated in the core skills of business analytics and the application of AI to the business context. Business analytics is interdisciplinary in its foundation, including core concepts from the social sciences of economics, management, finance, and operations as well as technical skills from statistics and computer science.

Manner in which the program will be delivered, including program location (if offered outside of the main campus), course scheduling, and the use of technology (for both on-campus and off-campus delivery)

The degree will be offered both in-person at the Corvallis campus and online via OSU's Ecampus. These modes of delivery correlate with the expected student populations, with both pre-experience (through a 4+1 model), dual-degree, and international students predominantly choosing the Corvallis modality, and early-career and current professionals predominantly choosing the online modality. As with other graduate business programs, students will be able to transition between modalities as their personal/professional situations evolve to ensure they are able to complete the degree as expeditiously as possible. Coursework will be scheduled in line with how existing graduate business coursework is scheduled that includes a mixture of daytime and evening courses in Corvallis, and asynchronously online.

Adequacy and quality of faculty delivering the program

The coursework involved includes a combination of existing graduate courses and two new Masters' courses that are scheduled to be developed by existing faculty. Thus, the current faculty are fully adequate to develop this program. Based on projected enrollments, which are expected to include sufficient students to enroll full additional sections, will require additional hiring of sufficient bandwidth to offer up to 9 sections (equivalent to one section of each required course in the Core MSBAAI curriculum).

Adequacy of faculty resources – full-time, part-time, adjunct

The Business Analytics faculty is currently comprised of 8.0 FTE with 5 Tenure-track and 3 full-time instructors.
Bin Zhu (1.0 FTE T/TT)

Shaokun Fan (1.0 FTE T/TT)
 Xiaohui Chang (1.0 FTE T/TT)
 Timothy Kaskela (1.0 FTE T/TT)
 Jim Coakley (1.0 FTE T/TT)
 Adam Vester (1.0 FTE SI 1)
 Evan Smouse (1.0 FTE SI 1)
 Yaoyu Tan (1.0 FTE, I)

Other staff

Advising is done centrally within the college through the Office of Graduate Business Programs, which has a total of 2.0 FTE. Recruiting is supported through the Office of Graduate Business Program, with three full-time recruiters (3.0 FTE) dedicated to supporting the Masters-level portfolio across all modalities. Marketing and Communication is a central function within the college with a total of 5.0 FTE. The capstone project is supported by the College's Advancement team, with 2.0 FTE dedicated specifically to undergraduate and graduate student industry engagement, internships, and projects. Student professional and career development is handled through the Career Success Center with approximately 1.0 FTE dedicated for graduate students across two positions. All aspects of the program will supervised by the Associate Dean for Graduate Programs, a 1.0 FTE position.

Adequacy of facilities, library, and other resources

In general, a non-thesis Masters' degree has a limited financial impact on library, lab, or other similar resources. The only facilities affected will be office space for new faculty hires. If we achieve strong on-campus growth (beyond 45 new students per cohort), we will need to make additional use of the "MBA Classroom" space in Austin Hall to offer additional sections. Since the Graduate Business Programs frequently offer nighttime courses to accommodate our working part-time students, we do not anticipate major facility issues with being able to support expected student numbers. We anticipate no facility/resource effects with the online modality.

Relationship to Mission and Goals

Manner in which the proposed program supports the institution's mission, signature areas of focus, and strategic priorities

The degree supports workforce development of technology-informed and data-driven business analysts who will help to support key economic sections of the state including technology, agriculture, manufacturing, education, and healthcare through solutions derived from data analysis and AI applications. Graduate will help to encourage the launching of AI-driven start-ups and the evolution of established businesses to respond to a rapidly evolving ecosystem. The program fits seamlessly into OSU's Prosperity Widely Shared Strategic Plan by contributing to the development of foundational strength in artificial intelligence, data science, and research computer, particularly in how these help to fuel a thriving world through sustainable global competitiveness and economic impact.

Manner in which the proposed program contributes to institutional and statewide goals for student access and diversity, quality learning, research, knowledge creation and innovation, and economic and cultural support of Oregon and its communities

The MSBAAI is a geographically accessible degree, with programming offered both in Corvallis and online where students can seamlessly transition between the two. The degree is accessible based on experience, as the curriculum supports students irrespective of their academic background, thus allowing students to use the degree as a pivot or a deepening of their existing skills. The degree is also accessible financially in that we have designed the curriculum to be completed within 45 graduate credits, which is the university Masters minimum, and the interdisciplinary focus and flexibility allows students to stack existing transcript-visible graduate certificates and credits into the required 45 credits. The same faculty teach across all modalities, and these faculty are members of an AACSB accredited college, confirming their research and scholarly credentials and engagement. We further note that the OSU College of Business has previous success in recruiting diverse cohorts of Masters' students with 24% of the 2023-2024 class being students of color, above the university's overall level of 20%, and with 23% reporting being first-generation. We will use the same recruiting channels to support the MSBAAI.

Manner in which the program meets regional or statewide needs and enhances the state's capacity to:

Improve educational attainment in the region and state:

By offering the degree in both in-person and online, we will be able to reach the entirety of the state. Further, since graduate business education, in general, and the MSBAAI in particular, are agnostic to previous disciplinary training, this graduate degree is open to any Oregon resident who holds a Bachelor's degree with an admissible undergraduate GPA. Given the general applicability of business analytics across a wide range of business functions and the coverage of applied AI and how it can help to improve business efficiency and competitiveness, this degree is a graduate-level degree that has the potential to provide advanced educational opportunities for a wide-range of Oregonians.

Further, many businesses note the importance of a workforce that is trained in analytics and increasingly well-versed in applied AI. This program is intended to attract in-person students to Oregon who may help to fulfill workforce needs within the state.

Respond effectively to social, economic, and environmental challenges and opportunities:

As Oregon continues to evolve in its economic, social, and environmental landscapes, the demand for skilled professionals capable of leveraging data and applying rapidly evolving artificial intelligence for decision-making is growing. The MSBAAI offers concentrations that contribute to these goals. In marketing, advanced analytics can help Oregon's businesses enhance customer engagement, foster local brands, and promote sustainable practices. In supply chain analytics, we can address critical logistical issues, optimizing the movement of goods across the state and supporting Oregon's manufacturing and agriculture sectors. In Finance, analytics

equips local businesses, startups, and public institutions with the tools to manage risks, improve efficiency, and foster economic growth. With environmental management, this offers insights for the optimal use of Oregon's natural resources. Further, AI-driven analytics can optimize energy usage, reduce carbon footprints, and develop sustainable strategies in various industries. By preparing professionals with these capabilities, this degree enhances Oregon's capacity to respond effectively to social, economic, and environmental challenges. Graduates will be positioned to innovate and lead across sectors, fostering resilience and prosperity throughout the state.

Address civic and cultural demands of citizenship

As Oregon's economy and population expand, the need for data-driven approaches to solve complex societal challenges increases. Graduates of the MSBAAI program will be equipped to analyze data and leverage AI to inform decision-making processes that enhance the state's civic engagement and cultural preservation. Again, within the scope of the different concentrations, the degree helps to contribute to a workforce that addresses the civic and cultural demands of Oregon's citizenship. In marketing, business analytics can help local governments and nonprofits effectively engage with diverse communities, ensuring that public services are accessible and culturally inclusive. The supply chain specialization can strengthen Oregon's local industries, improving the efficiency of distributing essential goods, particularly in times of crisis, to meet community needs. Financial analytics supports responsible public budgeting, helping municipalities optimize resources and invest in initiatives that promote social welfare and cultural vitality. Environmental management aligns with Oregon's focus on long-term sustainability, empowering graduates to tackle environmental justice issues and promote equitable policies that address the needs of marginalized communities.

By fostering leadership grounded in data-driven insight, this program prepares professionals to respond to the civic and cultural demands of Oregon's citizens, enhancing the state's capacity to build inclusive, resilient, and culturally vibrant communities.

Accreditation

Accrediting body or professional society that has established standards in the area in which the program lies, if applicable

Association to Advance Collegiate Schools of Business (AACSB) is the accrediting body.

Ability of the program to meet professional accreditation standards. If the program does not or cannot meet those standards, the proposal should identify the area(s) in which it is deficient and indicate steps needed to qualify the program for accreditation and date by which it would be expected to be fully accredited

The program will adhere to the accreditation requirements of AACSB, the most widely recognized and prestigious accreditation for business programs. We are (re)accredited on a quinquennial basis, with the next cycle in 2024-2025. The program is expected to meet the AACSB standards.

If the proposed program is a graduate program in which the institution offers an undergraduate program, proposal should identify whether or not the undergraduate program is accredited and, if not, what would be required to qualify it for accreditation

The undergraduate program is accredited through AACSB and on the same timeline as all other academic programs within the college. Note, AACSB does not individually accredit programs/degrees, but rather the university (with a specific focus on the "business" programs within the university). The new MSBAAI will meet the requirements similar to other business programs.

If accreditation is a goal, the proposal should identify the steps being taken to achieve accreditation. If the program is not seeking accreditation, the proposal should indicate why it is not

Program will be accredited as part of the AACSB process described above.

Need

Anticipated fall term headcount, FTE enrollment, and expected degrees/certificates produced over each of the next five years

Year One:

Fall Term Headcount:

45

FTE Enrollment:

35

Expected Degrees/Certificates

25

Year Two:

Fall Term Headcount:

85

FTE Enrollment:

60

Expected Degrees/Certificates:

55

Year Three:**Fall Term Headcount:**

120

FTE Enrollment:

82.5

Expected Degrees/Certificates

75

Year Four:**Fall Term Headcount:**

135

FTE Enrollment:

90

Expected Degrees/Certificates

90

Year Five:**Fall Term Headcount:**

135

FTE Enrollment:

90

Expected Degrees/Certificates

90

Characteristics of students to be served (resident/nonresident/international; traditional/ nontraditional; full-time/part-time, etc.)

The degree can serve every type of student. We expect about half of the Corvallis-based students to be full-time and half to be part-time. Of these, we expect 75% of full-time CV to be international, with remaining 25% to be resident, while almost all part-time Corvallis will be evenly split between resident and non-resident (since we expect many of these to be students pursuing double-degrees). For the online population, we expect essentially 100% to be part-time students (similar to our existing Masters' online students) and for these to be evenly split between residents and non-residents (domestic). We do not anticipate a sizeable international-online population, though the coursework is accessible if such a demand were to emerge.

Evidence of market demand

The Graduate Management Admissions Council (GMAC) Applications Trends Survey for 2023 reported continued growth in applications and enrollment in "Master of Business Analytics" programs within the U.S. Within the sample, 53% of universities reported increased enrollment (vs. 39% decline) with the largest growth in domestic students (55% growth) vs. international (49% growth). The average number of applications was 250 among these universities, with a 70% acceptance rate and 34% enrollment rate. This results in a median class sizes of 54. GMAC also reports that 20% of students who applied for graduate management degrees expressed an interest in the Master for Business Analytics, second only to Finance (at 24%). The recently released 2024 data reports a generally similar pattern of continued growth in Business Analytics programs. Over the past 10 years, GMAC reports growth in interest for Business Analytics has experienced the highest growth rate of any business programs, and double the rate of the nearest other discipline (Information Technology).

AACSB, which is the most notably accreditation for business schools, reports application and enrollment data for several programs. Data drawn in March, 2024 suggests that the average number of applicants for AACSB schools for Masters in Business Analytics programs is 58/49 for face-to-face/online programs, with average enrollments of 46/65, respectively.

We have modeled roughly equal numbers of face-to-face (F2F) and online students enrolling each year, beginning with roughly 22 in each modality in the first full year of recruiting, and culminating in "full" cohort sizes of 45 in each modality beginning each year. Given that the F2F are likely to be one-year and the online to be two-year students, this results in a mature program enrollment of 135 students. These numbers fit within the ranges from the GMAC and AACSB data.

We believe these estimates are reasonable for each campus. In the F2F program, we note COB has a strong relationship with INTO, that reports likely strong interest in a Business Analytics specialty degree that will fit both with a Pathway structure (that supports language mastery while earning credits that count towards the graduate credential) and the Masters-International-Direct (MID) program. Further, the MSBAAI will participate in both the Accelerated Masters Platform (AMP), which is a "4+1" structure, and in intentional partnerships with successful OSU graduate certificate programs (e.g. Environmental Management, SCLM, Business Fundamentals) for students interested in stacking graduate credentials to a Masters) Overall, we contend that the combination of these programs justifies our F2F projections.

Related to online enrollment, we note that COB's overall graduate online enrollment has been steadily increasing and now represents more than 50% of our graduate program. We believe there are four, and possibly five, populations that should feed into the online enrollments. These include (1) Guild/EdAssist/corporate partner businesses, (2) the online graduate certificate students who want to stack credentials towards a Masters', (3) more traditional domestic graduate students who are employed outside of existing partnerships and who need the graduate credential for career acceleration or mobility, (4) the growing population of undergraduate

COB (and broader OSU) online graduates and, (5) there is anecdotal evidence that students in certain emerging marketplaces, particularly in Africa and South Asia, may be warming to online programs where OSU's strong reputation may help to drive interest. In total, we believe these different sources should be sufficient to meet the expected 45-students/year goal.

Finally, we note that we have set initial enrollment numbers to be relatively high. This is because we are expecting some degree of cannibalization from the Master of Science in Business (MSB) program, particularly students who would have enrolled in Supply Chain Analytics, and some who would have enrolled in Marketing Insights and Analytics and Financial Analytics to instead choose to pursue the MSBAAI. We expect this because (a) the Master of Science in Business Analytics and Applied AI is a more standard specialty business Masters' program compared to the MSB and (b) the addition of the applied AI coursework and focus, which is not available for MSB students, will be attractive to a segment of students. However, as described above, there is also clear room for substantial incremental student enrollment growth above any cannibalized numbers.

If the program's location is shared with another similar Oregon public university program, the proposal should provide externally validated evidence of need (e.g., surveys, focus groups, documented requests, occupational/employment statistics and forecasts)

There is not a similar business-focused business analytics and applied AI degree. While there are degrees in AI (through the College of Engineering) and data analytics (through College of Science), these degrees are appropriately specialized towards the specific engineering and design challenges in the first case and the technical statistics/computer science tools in the second. Business analytics and applied AI focuses on the use of AI and statistical tools to analyze business and economic data and interpret those outcomes to make value-driven decisions.

The degree does share considerable elements with the existing College of Business MSB degree, particularly with the three "analytics" options. However, unlike the MSB, the core curriculum of the MSBAAI is analytics (and applied AI) focused rather than the general business found in the MSB. As discussed elsewhere in this proposal, the overlap between the MSB and MSBAAI is intentional and part of a longer-term process for the college to sunset the overlapping options between the MSB and MSBAAI. The "Master of Science in Business Analytics" is a broadly recognized degree by students and industry, while the "Master of Science in Business" is a much lesser recognized degree name and structure. Indeed, over the past several years, we have very often had questions from prospective students and employers about what the "MSB" degree is.

As additional evidence, an Oct 8, 2024 query to ChatGPT asking "How many degree programs specifically use the term "Master of Science in Business" generated the following response:

{begin}

Most programs offering a specialized master's degree in business do not use the exact title "Master of Science in Business." Instead, these programs are usually labeled based on their specific focus, such as "Master of Science in Business Analytics," "Master of Science in Finance," or "Master of Science in Marketing." For instance, schools like the University of Tampa offer an MS in Business Analytics, and Northeastern University provides a similar degree with distinct titles for each area of specialization(GradSchools.com)(FindAMasters).

Typically, the "Master of Science in Business" is a broader term, but the degree titles reflect the growing importance of specialized skill sets in different areas of business. Many institutions opt to specify the field of focus within the degree name to better align with job market demands. Therefore, if you're looking for a generalized "Master of Science in Business," you may find that specific programs like "MS in Business Analytics" or "MS in Marketing" dominate the offerings.

{end}

Thus, launching the MSBAAI should only have a "deleterious" impact on the College of Business' own MSB program enrollment, and we believe the more traditional name, plus a degree structure that focuses much more clearly on a core analytics curriculum that allows students to add concentrations across an array of other disciplines will be much more attractive to an incremental population of students who would have otherwise chosen a different university.

Estimate the prospects for success of program graduates (employment or graduate school) and consideration of licensure, if appropriate. What are the expected career paths for students in this program?

MSBAAI graduates, depending on their backgrounds, can be well positioned for analyst or director positions in business intelligence, operations research, customer insight, supply chain, risk management, and environmental/sustainability management. Further, positions such as an AI product manager, learning analytics specialist, EdTech product manager, and a wide array of consulting opportunities would also be viable. Indeed, GMAC reported in a 2022 survey that 59% of surveyed employers hired candidates with a Masters' in Business Analytics, and 80% of the Fortune 100 were planning to do so in 2023. UT-Dallas, that offers a similar Masters' program in Business Analytics and Artificial Intelligence, reports a 90% placement rate with average starting compensation of \$92K. Thus, we believe the prospects for graduates is very promising.

Outcomes and Quality Assessment

Expected learning outcomes of the program

1. Develop advanced predictive models using machine learning algorithms to forecast business trends and outcomes, demonstrating proficiency in applying regression, classification, and clustering techniques.
2. Evaluate data-driven solutions by assessing the reliability, validity, and ethical implications of applying artificial intelligence techniques in business contexts.
3. Analyze complex business datasets using advanced exploratory methods and data visualization techniques, extracting actionable insights to support strategic decision-making in various industries.
4. Analyze complex datasets using advanced exploratory methods and data visualization techniques, extracting actionable insights to support strategic decision-making in various industries.

Methods by which the learning outcomes will be assessed and used to improve curriculum and instruction

Program-level learning outcomes are collected and assessment on an ongoing/annual basis. Learning outcomes are associated with courses within the program of study as well as within the capstone. The Associate Dean for Graduate Student Development is responsible for collecting and reporting these data to program and college faculty (annually), OSU's Graduate School (annually), OSU's Office of Assessment (biennially), and AACSB (quinquennially). All learning outcomes are assessed using direct measures associated with coursework. AACSB requires continuous improvement plans for programs, which we will adhere to. Within the College of Business, the Graduate Program Committee (GPC) monitors and maintains the graduate curriculum and regularly reviews program-level learning outcome achievement.

Nature and level of research and/or scholarly work expected of program faculty; indicators of success in those areas

In general, Masters' students in business are not necessarily directly linked to faculty's research endeavors. However, faculty/instructors within all business academic programs must meet AACSB sufficiency guidelines/ratios for program delivery. The relevant ratios include 40% of delivery provided by "Scholarly Academic" faculty, who are defined as faculty who hold terminal degrees and who produce a minimum of two "impactful" research projects during a given 5-year window; this is the standard required for faculty to maintain "satisfactory" on annual performance evaluations and to be awarded tenure. "Impactful scholarship" is mostly commonly defined as academic publications at peer-reviewed journals with acceptance rates/reputations amongst discipline academics as "top-tier" or "near top-tier". At least 90% of the overall portfolio is required to be delivered by faculty who are qualified by a combination of scholarship, terminal degree holding and industry experience. The college has achieved and will continue to maintain these ratios, at a minimum, with the addition of the new Business Analytics faculty.

Program Integration and Collaboration

Closely related programs in this or other Oregon colleges and universities

As discussed above, there is not a similar business-focused business analytics and applied AI degree within OSU. While there are degrees in AI, through the College of Engineering and data analytics, through College of Science, these degrees are appropriately specialized towards the specific engineering challenges in the first case and the technical statistics/computer science tools in the second. Business analytics and applied AI focuses on the use of AI and statistical tools to analyze business and economic data and interpret those outcomes to make value-driven decisions.

Also, as discussed elsewhere, the current college of business MSB program and its options in Supply Chain Analytics, Marketing Insights and Analytics, and Financial Analytics are closely related to the MSBAAI degree and its concentrations in Supply Chain, Marketing, and Finance. This is by design as a step towards sun-setting these MSB options and instead offering a more recognizable specialized masters' degree name.

Ways in which the program complements other similar programs in other Oregon institutions and other related programs at this institution. Proposal should identify the potential for collaboration

The degree complements several programs within the College of Business at OSU, as evidenced by the interdisciplinary options, as well as outside the COB through the current option in Environmental Management. We can envision many potential future collaborations either in the form of new options, elective concentrations, and double degrees with programs around the university where an intersection with data-driven business analysis decisions exist.

The degree also works very well within a "stackable credential" portfolio. For example, both the existing Graduate Certificate in Supply Chain & Logistics Management and Environmental Management would fully transfer into the MSBAAI and stack into the degree. Within university transfer rules, the MSBAAI degree could be stacked with relevant certificates across many Oregon institutions. We look forward to these collaborations.

If applicable, proposal should state why this program may not be collaborating with existing similar programs

Not directly applicable although we welcome potential collaborations with disciplines and programs where the intersection with business analytics and AI applied for business purposes would add value.

Potential impacts on other programs

We do not foresee any deleterious impacts on any extant programs outside of the College of Business. Indeed, we believe that the interdisciplinary nature of the MSBAAI degree and its current and potential future options could drive an increased interest from students into these adjacent programs.

The one exception is the COB MSB program options, where we expect some "analytics" students to instead choose the much more recognizable MSBAAI degree. As discussed above, we believe the overall impact of this change will be a notable increase in COB enrollment.

Graduate Learning Outcomes (GLOs) for Graduate Students

Will this program fulfill more than one learning outcome?

Yes

Conduct research or produce some other form of creative work

List the measures or instruments used to assess each outcome. How do students demonstrate their attainment of the learning outcome? How is their learning evaluated? At least one of these must be a direct measure. In order to explore trends in the data, we advise that assessment method remain consistent from year-to-year

For Master's Programs, GLO #1 is "Conduct research, produce some other form of creative work, or participate in an integrative capstone experience". The student capstone project is the direct measure of the student's "integrative capstone experience" and will be taken within the program of study's capstone course.

Has this assessment method changed since the last reporting cycle?

No

What benchmark or milestone - related to the specific measure or instrument - is used to determine whether the outcome has been satisfactorily met by the students? In order to explore trends in the data, we advise that benchmarks remain consistent from year-to-year

The capstone project is typically a significant portion of the capstone course's grade assessment. The student's grade on the capstone project, overall, determines satisfactory completion of this learning outcome. At the program level, the College targets a minimum of 90% of students meeting this outcome on an annual basis.

Describe any changes to the benchmark or milestone since the last reporting cycle

N/A

Describe the data collection process (e.g., Who is involved? How is the data collected?)

The capstone project is reviewed by a committee during a final review/defense. Results are reported to the Associate Dean for Graduate Programs to be compiled and trends to be identified.

What do the data show about student learning relative to the specific learning outcome? Describe any result, pattern, or trends that you identify as meaningful or that highlights an area(s) of concern or success

N/A

Describe any course-level (content, pedagogical, structural, etc.) changes that are an outgrowth of the current year's assessment of this outcome. Include timelines

N/A

Describe any program or degree-level changes that are an outgrowth of the current year's assessment of this outcome. Include timeline

N/A

If this learning outcome has been assessed previously and is being reported on again this year, what impact have the changes had (if any) on student learning? If you have not previously assessed this learning outcome, indicate the year you will revisit this outcome

N/A

Demonstrate mastery of subject material

List the measures or instruments used to assess each outcome. How do students demonstrate their attainment of the learning outcome? How is their learning evaluated? At least one of these must be a direct measure. In order to explore trends in the data, we advise that assessment method remain consistent from year-to-year

Subject matter expertise is judged during the oral exam of the capstone defense, as well as the final project scores in BANA 573 and BANA 574. Each of these is a direct assessment.

Has this assessment method changed since the last reporting cycle?

No

What benchmark or milestone - related to the specific measure or instrument - is used to determine whether the outcome has been satisfactorily met by the students? In order to explore trends in the data, we advise that benchmarks remain consistent from year-to-year

This GLO is assessed through a portfolio of performance measures across multiple courses and the capstone oral defense. At the course-level, students are expected to earn a "B" or better to meet expectations in a direct assessment and to otherwise "Meet" or "Exceed" expectations. During the capstone defense, students are expected to "meet" the expectations of the examination committee. Overall, the program targets 90+% of students meeting the GLO.

Describe any changes to the benchmark or milestone since the last reporting cycle

N/A

Describe the data collection process (e.g., Who is involved? How is the data collected?)

N/A

What do the data show about student learning relative to the specific learning outcome? Describe any result, pattern, or trends that you identify as meaningful or that highlights an area(s) of concern or success

N/A

Describe any course-level (content, pedagogical, structural, etc.) changes that are an outgrowth of the current year's assessment of this outcome. Include timelines

N/A

Describe any program or degree-level changes that are an outgrowth of the current year's assessment of this outcome. Include timeline

N/A

If this learning outcome has been assessed previously and is being reported on again this year, what impact have the changes had (if any) on student learning? If you have not previously assessed this learning outcome, indicate the year you will revisit this outcome

N/A

Conduct scholarly or professional activities in an ethical manner

List the measures or instruments used to assess each outcome. How do students demonstrate their attainment of the learning outcome? How is their learning evaluated? At least one of these must be a direct measure. In order to explore trends in the data, we advise that assessment method remain consistent from year-to-year

A portion of the capstone project specifically assesses students' understanding of ethical activities, which will be assessed during capstone/oral defense. The exact nature of this instrument will vary depending on the exact capstone project, but capstones almost always involve direct interaction with external stakeholders in business-realistic settings, and thus students will have the opportunity to demonstrate professional activities in an ethical manner.

Has this assessment method changed since the last reporting cycle?

No

What benchmark or milestone - related to the specific measure or instrument - is used to determine whether the outcome has been satisfactorily met by the students? In order to explore trends in the data, we advise that benchmarks remain consistent from year-to-year

The program targets 90% of students to at least "meet" this expectations.

Describe any changes to the benchmark or milestone since the last reporting cycle

N/A

Describe the data collection process (e.g., Who is involved? How is the data collected?)

N/A

What do the data show about student learning relative to the specific learning outcome? Describe any result, pattern, or trends that you identify as meaningful or that highlights an area(s) of concern or success

N/A

Describe any course-level (content, pedagogical, structural, etc.) changes that are an outgrowth of the current year's assessment of this outcome. Include timelines

N/A

Describe any program or degree-level changes that are an outgrowth of the current year's assessment of this outcome. Include timeline

N/A

If this learning outcome has been assessed previously and is being reported on again this year, what impact have the changes had (if any) on student learning? If you have not previously assessed this learning outcome, indicate the year you will revisit this outcome

N/A

Process

Describe the process the program used to reflect on the outcome data

N/A

Were there any challenges or concerns?

N/A

How are the results of your assessment effort related to strategic planning and overall program review?

N/A

Are there specific data archiving notes for the outcome(s) you are reporting on in this report?

N/A

Plans

Describe the unit's (or sub-units) assessment plans for the upcoming year

N/A

Additional Graduate Level Student Learning Outcomes (optional)

Learning Outcome

1. Develop advanced predictive models using machine learning algorithms to forecast business trends and outcomes, demonstrating proficiency in applying regression, classification, and clustering techniques.

What year was this program level learning outcome developed or most recently changed?

New

List the measures or instruments used to assess each outcome. How do students demonstrate their attainment of the learning outcome? How is their learning evaluated? At least one of these must be a direct measure. In order to explore trends in the data, we advise that assessment method remain consistent from year-to-year

BANA 560: Introduction to Business Analytics and Intelligence (term project). This direct assessment specifically focuses on the PLO through the sections of the final project. The assessment is based on student performance in the project.

Has this assessment method changed since the last reporting cycle?

No

Explain any changes

N/A

What benchmark or milestone - related to the specific measure or instrument - is used to determine whether the outcome has been satisfactorily met by the students? In order to explore trends in the data, we advise that benchmarks remain consistent from year-to-year

Graduate programs expects 90% or more of students to at least "meet" expectations, demonstrated by scoring at least a "B" on the project assignment.

Describe any changes to the benchmark or milestone since the last reporting cycle

N/A

Describe the data collection process (e.g., Who is involved? How is the data collected?)

The faculty member reports individual student performance to the Associate Dean of Graduate Programs who is responsible for tabulating results at the program level and reporting performance to discipline faculty, the college's graduate curriculum committee, the Graduate School, and the Office of Assessment.

What do the data show about student learning relative to the specific learning outcome? Describe any result, pattern, or trends that you identify as meaningful or that highlights an area(s) of concern or success

N/A

Describe any course-level (content, pedagogical, structural, etc.) changes that are an outgrowth of the current year's assessment of this outcome. Include timelines

N/A

Describe any program or degree-level changes that are an outgrowth of the current year's assessment of this outcome. Include timeline

N/A

If this learning outcome has been assessed previously and is being reported on again this year, what impact have the changes had (if any) on student learning? If you have not previously assessed this learning outcome, indicate the year you will revisit this outcome

N/A

Learning Outcome

2. Evaluate data-driven solutions by assessing the reliability, validity, and ethical implications of applying artificial intelligence techniques in business contexts.

What year was this program level learning outcome developed or most recently changed?

New

List the measures or instruments used to assess each outcome. How do students demonstrate their attainment of the learning outcome? How is their learning evaluated? At least one of these must be a direct measure. In order to explore trends in the data, we advise that assessment method remain consistent from year-to-year

BANA 573 Final Project & Capstone Project. Student demonstrate achievement of learning outcome by successfully completing each of these major projects focused on evaluating the reliability and validity, as well as ethical considerations in applying AI-driven evaluations. A student meets expectations by earning a minimum performance score of "B". Both of these are direct measures of the PLO.

Has this assessment method changed since the last reporting cycle?

No

Explain any changes

N/A

What benchmark or milestone - related to the specific measure or instrument - is used to determine whether the outcome has been satisfactorily met by the students? In order to explore trends in the data, we advise that benchmarks remain consistent from year-to-year

Graduate programs expects 90% or more of students to at least "meet" expectations, demonstrated by scoring at least an 80% on the project assignment.

Describe any changes to the benchmark or milestone since the last reporting cycle

N/A

Describe the data collection process (e.g., Who is involved? How is the data collected?)

The faculty member reports individual student performance to the Associate Dean of Graduate Programs who is responsible for tabulating results at the program level and reporting performance to discipline faculty, the college's graduate curriculum committee, the Graduate School, and the Office of Assessment.

What do the data show about student learning relative to the specific learning outcome? Describe any result, pattern, or trends that you identify as meaningful or that highlights an area(s) of concern or success

N/A

Describe any course-level (content, pedagogical, structural, etc.) changes that are an outgrowth of the current year's assessment of this outcome. Include timelines

N/A

Describe any program or degree-level changes that are an outgrowth of the current year's assessment of this outcome. Include timeline

N/A

If this learning outcome has been assessed previously and is being reported on again this year, what impact have the changes had (if any) on student learning? If you have not previously assessed this learning outcome, indicate the year you will revisit this outcome

N/A

Learning Outcome

3. Analyze complex datasets using advanced exploratory methods and data visualization techniques, extracting actionable insights to support strategic decision-making in various industries.

What year was this program level learning outcome developed or most recently changed?

New

List the measures or instruments used to assess each outcome. How do students demonstrate their attainment of the learning outcome? How is their learning evaluated? At least one of these must be a direct measure. In order to explore trends in the data, we advise that assessment method remain consistent from year-to-year

BANA 570 final project; BANA 571 final project. The final projects in each course are focused on analytics and visualization techniques linked to effective communication of critical business information across different industries. Both projects are direct measures and students are expected to earn a "B" or higher to have demonstrated at least "meeting" expectations.

Has this assessment method changed since the last reporting cycle?

No

Explain any changes

N/A

What benchmark or milestone - related to the specific measure or instrument - is used to determine whether the outcome has been satisfactorily met by the students? In order to explore trends in the data, we advise that benchmarks remain consistent from year-to-year

Graduate programs expects 90% or more of students to at least "meet" expectations, demonstrated by scoring at least an 80% on the project assignment.

Describe any changes to the benchmark or milestone since the last reporting cycle

N/A

Describe the data collection process (e.g., Who is involved? How is the data collected?)

The faculty member reports individual student performance to the Associate Dean of Graduate Programs who is responsible for tabulating results at the program level and reporting performance to discipline faculty, the college's graduate curriculum committee, the Graduate School, and the Office of Assessment.

What do the data show about student learning relative to the specific learning outcome? Describe any result, pattern, or trends that you identify as meaningful or that highlights an area(s) of concern or success

N/A

Describe any course-level (content, pedagogical, structural, etc.) changes that are an outgrowth of the current year's assessment of this outcome. Include timelines

N/A

Describe any program or degree-level changes that are an outgrowth of the current year's assessment of this outcome. Include timeline

N/A

If this learning outcome has been assessed previously and is being reported on again this year, what impact have the changes had (if any) on student learning? If you have not previously assessed this learning outcome, indicate the year you will revisit this outcome

N/A

Learning Outcome

4. Design and implement optimized algorithms for specific business problems, leveraging techniques such as deep learning, natural language processing, and large language modeling to improve operational efficiency and performance.

What year was this program level learning outcome developed or most recently changed?

New

List the measures or instruments used to assess each outcome. How do students demonstrate their attainment of the learning outcome? How is their learning evaluated? At least one of these must be a direct measure. In order to explore trends in the data, we advise that assessment method remain consistent from year-to-year

BANA 572: Machine Learning and Natural Language Processing for Business (final project); BANA 574: Deep learning, generative AI over multimedia data for Business (final project).

The final projects in each course is focused on designing and mapping the implementation of solutions to specific business optimization challenges by applying deep learning, NLP, and LLM models. Each of these is a direct assessment of the PLO.

Has this assessment method changed since the last reporting cycle?

No

Explain any changes

N/A

What benchmark or milestone - related to the specific measure or instrument - is used to determine whether the outcome has been satisfactorily met by the students? In order to explore trends in the data, we advise that benchmarks remain consistent from year-to-year

Graduate programs expects 90% or more of students to at least "meet" expectations, demonstrated by scoring at least a "B" on the project assignment.

Describe any changes to the benchmark or milestone since the last reporting cycle

N/A

Describe the data collection process (e.g., Who is involved? How is the data collected?)

The faculty member reports individual student performance to the Associate Dean of Graduate Programs who is responsible for tabulating results at the program level and reporting performance to discipline faculty, the college's graduate curriculum committee, the Graduate School, and the Office of Assessment.

What do the data show about student learning relative to the specific learning outcome? Describe any result, pattern, or trends that you identify as meaningful or that highlights an area(s) of concern or success

N/A

Describe any course-level (content, pedagogical, structural, etc.) changes that are an outgrowth of the current year's assessment of this outcome. Include timelines

N/A

Describe any program or degree-level changes that are an outgrowth of the current year's assessment of this outcome. Include timeline

N/A

If this learning outcome has been assessed previously and is being reported on again this year, what impact have the changes had (if any) on student learning? If you have not previously assessed this learning outcome, indicate the year you will revisit this outcome

N/A

Information for the Catalog

How many total credits are required for completion of this program?

45

Catalog Description (this will display on the Overview tab in the Catalog)

The Master of Science in Business Analytics and Applied AI prepares students to harness the power of data and AI technologies to solve current and emerging complex business challenges. This interdisciplinary program blends business strategy with cutting-edge analytical techniques and AI-driven solutions, equipping graduates with the skills needed to extract and communicate meaningful insights from data. Students will learn to implement AI tools, predictive modeling, and machine learning algorithms to drive business innovation, optimize operations, and improve decision-making processes. The program offers concentrations in the key areas Supply Chain Analytics, Environmental Management, Marketing, Finance, Information Systems, as well as a wide range of elective offerings, allowing students to specialize in their chosen area of interest.

Throughout the program, students will engage in hands-on projects and real-world case studies to apply their knowledge in practical settings. By integrating data science, AI, and business acumen, graduates will be prepared to lead data-driven initiatives and navigate the complexities of today's fast-evolving business landscape. Additionally, the program emphasizes ethical considerations in AI applications, ensuring that graduates are equipped to handle both the technical and societal implications of these powerful technologies. The comprehensive curriculum addresses the growing demand for professionals who can seamlessly integrate AI into strategic business operations across industries.

Requirements (this will display on the Requirements tab in the Catalog and be coded into MyDegrees)

Code	Title	Credits
Required Core		
BA 514	OPERATIONS MANAGEMENT	3
BANA 560	BUSINESS ANALYTICS AND AI FOR COMPETITIVE ADVANTAGE	3
BANA 570	DATA MANAGEMENT	3
BANA 571	DATA EXPLORATION AND VISUALIZATION	3
BANA 572	MACHINE LEARNING AND TEXT MINING FOR BUSINESS	3
BANA 573	DESIGNING AI PRODUCTS AND SERVICES FOR BUSINESS	3
BANA 574	NEURAL NETWORKS AND DEEP LEARNING FOR BUSINESS	3
BANA 577	INTEGRATED BUSINESS ANALYTICS PROJECT	3
Electives		

Select a minimum of 21 credits from the following: ¹

Business Fundamentals

BA 513	BUSINESS LEGAL ENVIRONMENT
BA 515	MANAGERIAL DECISION TOOLS
BA 516	CREATING VALUE IN EXCHANGE
BA 517	MARKETS AND VALUATION

Supply Chain Analytics

BA 555	PRACTICAL BUSINESS ANALYSIS
BA 561	SUPPLY CHAIN MANAGEMENT
SCLM 550	SUPPLY AND SOURCING MANAGEMENT
SCLM 551	SERVICE OPERATIONS MANAGEMENT
SCLM 553	SUPPLY CHAIN ANALYTICS
SCLM 557	GLOBAL LOGISTICS MANAGEMENT: FUNDAMENTALS AND STRATEGY
SCLM 559	SUPPLY CHAIN AND LOGISTICS MANAGEMENT CAPSTONE

Environmental Management

CCE 522	GREEN BUILDING MATERIALS PROJECTS
ENSC 506	PROJECTS
ENSC 515	ENVIRONMENTAL PERSPECTIVES AND METHODS
ENSC 516	USING BEST PRACTICES IN ENVIRONMENTAL PROJECT MANAGEMENT
ENSC 517	ENVIRONMENTAL MANAGEMENT AND SUSTAINABILITY ASSESSMENT
FES 560	GREEN INFRASTRUCTURE
GEOG 552	ENVIRONMENTAL ASSESSMENT
HEST 512	MULTIDISCIPLINARY CASE STUDIES IN HUMANITARIAN ENGINEERING, SCIENCE AND TECHNOLOGY

Finance

BA 528	FINANCIAL AND COST ANALYSIS
BA 540	CORPORATE FINANCE
FIN 540	FIXED INCOME SECURITIES
FIN 541	FINANCIAL INSTITUTIONS
FIN 542	INVESTMENTS
FIN 543	PORTFOLIO MANAGEMENT
FIN 544	FINANCIAL RISK MANAGEMENT
FIN 545	INTERNATIONAL FINANCIAL MANAGEMENT
FIN 546	ADVANCED CORPORATE FINANCE
FIN 547	COMMERCIAL BANKING
FIN 548	INTERNATIONAL FINANCIAL MARKETS
FIN 549	MERGERS AND ACQUISITIONS
FIN 560	PRINCIPLES OF FINANCIAL PLANNING

Marketing

BA 590	MARKETING MANAGEMENT
MRKT 584	DIGITAL MARKETING PLATFORMS
MRKT 585	SEARCH MARKETING
MRKT 586	CUSTOMER RELATIONSHIP MANAGEMENT
MRKT 588	PROFESSIONAL SALES
MRKT 589	PERSONAL SELLING SKILLS AND TECHNIQUES
MRKT 592	CONSUMER BEHAVIOR
MRKT 593	INTEGRATED MARKETING COMMUNICATIONS
MRKT 595	RETAIL MANAGEMENT
MRKT 597	GLOBAL MARKETING

Information Systems

ACTG 520	IT AUDITING
BA 572	ADVANCED INFORMATION SYSTEMS
BIS 571	BUSINESS TELECOMMUNICATIONS AND NETWORKING
BIS 572	INFORMATION SYSTEMS SECURITY

Total Credits**45**

1

Other electives may be accepted with advisor approval

Letters of Support**External Letters of Support**

OSU MSBAAI Program Rec Letter 1.pdf
Support letter PDX Trailblazers.pdf

Accessibility Form**Accessibility Guidelines**

I have reviewed the listed documents

Faculty Guidelines

I have reviewed the listed documents

Information Technology Guidelines

I have reviewed the listed documents

By submitting this form, we affirm that we have reviewed the listed documents and will apply a good faith effort to ensure accessibility in curricular design, delivery, and supporting information.

External Review of New Graduate Program**Review Documents**

External Review Report MSBAAI.pdf

Library Evaluation**Will this program require the creation of new courses?**

Yes

Provide peer comparator review

University of Washington
University of Florida
Babson College
UC Davis

Provide projected faculty and student FTE for your program

8.0-9.0 FTE Faculty (8 are currently on faculty)
Student FTE after 3 years is 82.5 (as discussed within the proposal)

Provide detail about any special research areas of interest

This is a non-research graduate degree and we expect it to have little or no impact on the research enterprise of our faculty or students.

Library Evaluation (to be completed by Librarian)

Category_I_Library_Assessment_Business_Analytics_and_AI_SIGNED.pdf

Administrative Template (Library Use Only)**Summary of Recommendations**

The monographic collection appears to be marginally adequate to support the proposed program.

The journal collection is currently marginally adequate to support the proposed program.

Print and Electronic Monographs

Library evaluations of proposed programs have traditionally included the analysis of OSULP's print monograph collection. However, the library currently prioritizes e-book purchases of texts over print versions due to space and accessibility considerations. For print materials that are unavailable through OSU's library, students and faculty may request those materials through OSULP's scan and deliver and mailing services.

The growing availability of e-books makes it possible to expedite access to more information from various locations. Students are able to access the books from their computer or mobile device at any time. The library currently provides access to over 16,000 e-books in subjects related to Business Analytics and AI. However, out of the top 50 most widely held "Business Analytics" titles published within the past 5 years in WorldCat, OSULP only provides print or e-book access to 16% of them. The average cost for an e-book in "Business Analytics" is about \$200, bringing an investment of 42 new titles to \$8,400.

OSU is well served by the OSULP investment in the Orbis/Cascades Alliance, whose combined collection is substantial. Students and faculty can order from the collections of all the libraries in the Orbis Cascade Alliance through the Summit catalog. University of Oregon, Portland State University, University of Washington and Washington State University are some of the larger research libraries represented in the Summit catalog. Books requested through Summit are delivered to OSUL within three to five working days.

Media

The media collection is adequate to support the program. OSULP provides access to Kanopy, which allows students and researchers to view over 30,000 streaming videos on demand.

Serials/Journals

OSULP maintains a marginally adequate collection of journals for this proposed program. There is concern that with regular price increases to our licenses and a flat budget that access may be eroded over time. OSULP has sacrificed timely access to some titles in favor of an embargo period to cut costs (an embargo means we do not have immediate full-text access to the most current 12–18-months). A list of key journals for this program was developed using the “Business and Operations Research & Management Science” subject categories in the Journal Citation Report (JCR). This produced a list of 312 journals. The list includes those titles that we have current access to, those with embargoes, and those not owned by the OSULP.

OSU Libraries has current subscriptions to 113 of these titles, 22 are fully open access, and we have limited access to an additional 75 titles. Thirty-four additional journals allow for expedited access via our Article Delivery Service. Of the 84 high-impact journals (JIF >5), the library has current access to 36 of them and expedited access to 24 titles through Article Galaxy Scholar; 16 have delayed access. There are 9 highly relevant journals that may be recommended for a new or current subscription if a 1-year embargo is not acceptable.

In addition to the recommended new subscription, the library will monitor usage of interlibrary loan (ILL) for titles under embargo and those with no access to determine whether usage justifies the acquisition of additional journals. Many of the high impact journals in this area are published by Elsevier. The library has invested in an Article Delivery Service that allows pay-per-view access to Elsevier content. This service is expedited, and usually delivers the requested article within an hour. Interlibrary loan services are also available where delivery ranges from same day to multiple days. Combined, these services should allow for adequate access to cover most major journals for this research area. The library assumes the cost for all articles requested via interlibrary loan and those purchased through the Article Delivery Service.

Recommended New Journals

Global Strategy Journal 2042-5805

Wiley

1-year embargo

\$588.00/ year

Internet Research 1066-2243

Emerald Publishing Group

1-year embargo

EST \$2500.00/year

Journal of Management Studies 1467-6486

Wiley

2007-2008

\$3,925.00/year

Journal of Product Innovation Management 1540-5885

Wiley

1-year embargo

\$1,536.00/year

Journal of Research & Interactive Marketing 2040-7130

Emerald Publishing Group

No Access

EST \$2500.00/year

Product Planning & Control 1366-5871

Taylor & Francis LTD

No Access

\$2,888.00/year

R & D Management 1467-9310

Wiley

1-year embargo

\$3,514.00/year

Strategic Entrepreneurship Journal 1932-443X

Wiley

2007-2009

\$705.00/year

Supply Chain Management – An International Journal 1758-6852
 Emerald Publishing Group
 No Access
 EST \$2500.00/year
 \$20,656 for new journal subscriptions (if embargoes are not acceptable)

Recommended New Databases

None

Recommended Book/Ebook Expenditures

\$8,400 for new Business Analytics monographs

Indexes and Databases

Business Source Complete EBSCO

1886 - present

Available content includes case studies, investment research & industry reports, market research reports, country reports, SWOT analyses, and full-text for scholarly journals.

Mintel Market Research Reports

Present

Mintel offers market research reports covering US and International marketplaces. Each report combines data & analysis of the competitive landscape, market-share analysis and consumer profiles.

Wharton Research Data Services

1980 - present

The standard for business data, providing researchers worldwide with instant access to financial, economic, and marketing data through a uniform, web-based interface.

Inter-university Consortium for Political and Social Research

1962 - present

ICPSR acquires, processes and distributes social science data collected by government agencies and other researchers.

IEEE Xplore

1988 - present

Access to journals, magazines, conference proceedings and standards. Full-text access to technical literature in computer science, AI, and data science.

ACM Digital Library

1908 - present

A database that includes both citations and full text for journals, newsletters, and conference proceedings related to computing machinery and AI

Mergent Online

1997 - present

Mergent Online is a subscription-based service offering information on approximately 15,000 NYSE, AMEX, and NASDAQ companies. The service also provides data on 20,000 non-U.S. based corporations.

Library Services

Library faculty help students develop information literacy skills--the ability to locate, evaluate, and use information effectively--and help students understand their lifelong roles and responsibilities as both consumers and creators in the information ecosystem. More information on library instruction is available at <https://library.oregonstate.edu/instruction-services>.

The Library Liaison for the College of Business is Diana Castillo. Clara Llebot Lorente is OSULP's Data Management Specialist, who specializes in data management plans and data curation. Liaisons are library faculty members that monitor the strategic directions and priorities of college and programs, and are a conduit to the expertise and services of the OSU Libraries.

Ecampus programs are also supported by the Ecampus librarian, Zach Welhouse, who supports instructors and students in the use of library resources and services, including custom research guides and webinars on demand. See the Ecampus Library Services guide at https://guides.library.oregonstate.edu/Ecampus_Library for more information.

The OSULP Collection Council maintains the libraries' collections. Providing access to items not owned by OSULP is the domain of the Interlibrary Loan and Summit staff both at OSULP and at lending libraries. Print articles located in the OSU Libraries collections may be requested via the Scan and Deliver service, which provides PDFs of the requested articles. Additional services for students include the physical attributes of the libraries including excellent computer facilities, study areas for individual and group work, and practice rooms for students.

Faculty CVs

I will provide individual CVs if requested by Faculty Senate Curriculum Council

Acknowledge

Enter faculty below: (click the green plus button to add faculty members)

Faculty Name	Academic Home	Highest Degree	Position Title	Area of Expertise/ Interest	Role Within Program
Bin Zhu	MAD	PhD	Associate Professor	Business Analytics and Artificial Intelligence	Program Lead
Shaokun Fan	MAD	PhD	Associate Professor	Business Analytics	Faculty
Xiaohui Chang	MAD	PhD	Associate Professor	Business Analytics and Statistics	Faculty
Timothy Kaskela	MAB	PhD	Assistant Professor	Business Analytics	Faculty
Jim Coakley	MAD	PhD	Associate Professor	Information Systems & Management	Faculty
Adam Vester	MAD	PhD	Senior Instructor 1	Business Analytics and Economics	Faculty
Evan Smouse	MAD	PhD	Senior Instructor 1	Mathematical Statistics and Business Analytics	Faculty
Yaoyu Tan	MAD	MS	Instructor	Supply Chain Analytics	Faculty

Budget Information

Budget Worksheet and Narrative

Master of Science in Business Analytics and Applied AI Budget Narrative.docx
osubudget_worksheet_Business Analytics and Applied AI.xlsx

Supporting Documentation

Computer Science AI Emails.docx

Reviewer Comments

Belinda Sykes (Office of the Registrar, Catalog Curriculum Coordinator) (belinda.sykes) (Thu, 20 Mar 2025 07:37:25 GMT): A course proposal is in progress which removes BA 555 as a prereq to BANA 577.

Jack Istok (School of Civil Construction Engineering, School Head) (jack.istok) (Thu, 27 Mar 2025 16:48:41 GMT): no objection

Kathryn Becker Blease (School of Psychological Science, Director) (kathryn.blease) (Thu, 27 Mar 2025 16:55:37 GMT): No concerns from the School of Psychological Science.

Mark Needham (Forest Ecosystems Society, Professor) (mark.needham) (Thu, 27 Mar 2025 17:08:10 GMT): As the liaison for the Forest Ecosystems and Society MF, MS, and PhD programs, I have no concerns about this proposal.

Carolyn Fonyo Boggess (Environmental Sciences, Director) (carolyn.fonyo) (Thu, 27 Mar 2025 18:47:34 GMT): This looks excellent and I hope you will open the courses to our ESGP students who will be interested in the combination of AI business applications and sustainability/environmental management.

Glencora Borradaile (School of Electrical Engineering Computer Science, Associate Dean of Graduate Programs) (glencora.borradaile) (Thu, 27 Mar 2025 20:11:49 GMT): Please ensure the director of the AI program (Prasad Tadepalli) is included as a liaison.

Prasad Tadepalli (School of Electrical Engineering Computer Science, Professor) (prasad.tadepalli) (Wed, 16 Apr 2025 22:42:55 GMT): I am supportive of the proposal and especially like the Capstone idea. I think that the proposal is well-thought out and well-written. I do have some concerns and comments. 1.The degree does not have specific prerequisites such as programming experience, algorithms, statistics or calculus. However, the topics include "advanced deep-learning algorithms including recurrent neural networks, convolutional neural networks, graph neural network, deep reinforcement learning, attention mechanisms, transformer networks, Kohonen self-organizing maps, and generative adversarial networks." To me, this sounds a little too optimistic. It is also not clear to me whether you are planning to teach these courses in CoB or relying on courses taught on CoE. EECS currently offers a course in machine learning for non-majors, which might be adapted to your use, but it assumes some minimal prerequisites. From

the perspective of conserving university resources it makes most sense to adapt the current EECS course rather than developing your own. The goal in introducing this course was to serve the university community at large, and avoid duplication of course content. 2. On the other hand, it is possible that the internals of convolutional neural networks, transformers and more advanced topics are not necessary to teach students who are interested on applying AI to business. It may be possible to take an "outsider perspective" and teach the proper use of the AI tools, their evaluation, statistical confidence tests, limitations and ethical issues. If this is your goal, a specialized course may be defensible. Similar comments apply to your other courses such as BANA 572 "Data Science and Natural Language Processing for Business." 3. Some of the links in the core course list point to courses which do not exist or have different titles than what has been described in the proposal, eg, BANA 560, BANA 574, BANA 572. This needs to be fixed. 4. Please consider having the degree name simply as "MS in Business Analytics," especially if you want a degree with no prerequisites and do not require technical courses. I think that this is more consistent with other Business schools. More technically oriented students can get an AI minor offered in EECS. You could also make "Applied AI" an option and add more AI requirements. That's all I have. Thank you for including me in the liaison list.

John Becker-Bleuse (College of Business, Associate Dean of Graduate Programs, and Graduate Council Chair) (john.becker-bleuse) (Fri, 16 May 2025 16:06:02 GMT): COB engaged with Prasad Tadepalli in an email exchanged regarding the questions and concerns raised. Contents of these emails are included as an additional attachment (labeled Computer Science AI Emails). The exchange concludes with "I still have some reservations about doing everything in-house and not relying on other departments, but otherwise support your proposal". We feel that the courses we currently offer in the successful MBA and MSB programs (including the machine-learning course) will also serve Business Analytics and Applied AI students as it sets them up for success in the specific business application curriculum. We also emphasize that we will certainly welcome developing an option within the degree for the more technically qualified and interested students who wish to pursue coursework through the engineering AI offerings.

Janice Nave-Abele (Curriculum Management, Curriculum Coordinator) (janice.nave-abele) (Tue, 10 Jun 2025 17:33:27 GMT): Per Prasad's comment: BANA 560 is approved and the name change will go into effect in Summer 2026. BANA 572 is update in CIM effective Summer 2024. BANA 574 is approved and now in effect for Summer 2025

Jonathan Fram (College of Earth, Ocean Atmospheric Sciences, Associate Professor) (jonathan.fram) (Fri, 20 Jun 2025 19:14:29 GMT): The Budgets and Fiscal Planning Committee supports this proposal. The proposed budget is well justified. However, the committee agrees with the other comments about overlap with material taught elsewhere in the university. It would be more efficient for OSU and perhaps more interesting/useful for students if there were AI classes that met requirements of multiple programs.

Janice Nave-Abele (Curriculum Management, Curriculum Coordinator) (janice.nave-abele) (Mon, 20 Oct 2025 18:08:30 GMT): Requested Originator to respond to Jonathan Fram's comment. BFPC does not usually comment on program course content.

Janice Nave-Abele (Curriculum Management, Curriculum Coordinator) (janice.nave-abele) (Tue, 21 Oct 2025 16:04:56 GMT): Holding proposal per request from Originator while he works through the comments.

Janice Nave-Abele (Curriculum Management, Curriculum Coordinator) (janice.nave-abele) (Mon, 10 Nov 2025 20:52:41 GMT): Rollback: Roll back to grad council per JBB.

John Becker-Bleuse (College of Business, Associate Dean of Graduate Programs, and Graduate Council Chair) (john.becker-bleuse) (Wed, 12 Nov 2025 18:50:09 GMT): As a follow-up response to the above comments, we are clarifying that the degree is indeed clearly focused on the application of AI to business rather than the design or development of AI systems. This is why the admissions requirements for the MS-Business Analytics and Applied AI does not require background in programming, algorithms, statistics, or calculus. We have updated the language in the HECC Description to align with that in the that is the Executive Summary that should clear up this confusion. In response to the concern of duplication, we note that the coursework/content in question is indeed specialized content designed for specific application in business analytics. Further, we note that this coursework (BANA 560 and BANA 572) is not introduced as new coursework associated with this degree but are instead currently embedded in the core business analytics curriculum where these existing courses included in multiple COB graduate programs including the MBA-Business Analytics, all four MSB options (Finance, Financial Analytics, Marketing Insights and Analytics, and Supply Chain Analytics), the graduate certificate in Business Analytics, and the MS-Supply Chain and Logistics Management. These specialized courses are part of an existing prerequisite string tying the business analytics curriculum together and our proposal is to continue using these two courses as part of the core curriculum for the new MS degree. We believe this makes the most efficient use of existing well-subscribed courses as a foundation for a new in-demand degree.

Steve Reese (School of Nuclear Science Engineering, Director-Radiation Center) (steve.reese) (Thu, 13 Nov 2025 17:50:57 GMT): While I appreciate comments to the effect that there should be university-wide AI courses, my feeling is that it is still important to have subject matter AI focused courses. I support this program.

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