May 6, 2024

Academic Program Viability and Curricular Innovation Working Group

Executive Summary

In this Academic Program Viability and Curricular Innovation Working Group Report, we share values and definitions that guide the work of program viability, offer a description of the current state of program viability and curricular innovation at the institution, share some of the current challenges related to program viability and curricular innovation, and offer a series of recommendations to strengthen and clarify the processes for program viability decisions and curricular innovation supports.

Briefly, the recommendations we offer include the following:

- Recommendation # 1: Establish Guiding Principles for Program Viability that Encourage Curricular Innovation
- Recommendation # 2: Clarify the Metrics Used to Assess Program Viability
- Recommendation # 3: Implement Comprehensive and Inclusive Data Literacy Professional Learning Opportunities that Support Program Success
- Recommendation # 4: Develop and Implement Decision-Making Guidelines for Academic Program Viability Processes
- Recommendation # 5: Implement an Annual Health Check Process for all Academic Programs
- Recommendation # 6: Create a Tiered Support Model for all Academic Programs
- Recommendation # 7: Construct a Review and Appeals Process that Honors Shared Governance
- Recommendation # 8: Align Budget Model Principles and Revisions with Program Growth Incentives and Program Enhancement Needs

Introduction

In the ever-evolving landscape of higher education, institutions continually grapple with the dual challenges of maintaining program viability and supporting curricular innovation. Acknowledging these imperatives, the Academic Program Viability and Curricular Innovation Working Group was convened with a goal of developing a clear, data-informed, and transparent set of processes and protocols for the early ongoing detection and required realignment of academic programs to current workforce needs, learner demand, and the development of culturally literate lifelong learners.

The nexus between program viability, curricular innovation, and institutional strategic planning is mutually reinforcing. It is also inclusive of a range of campus community members from faculty, to staff, to academic and institutional leaders, and others. As CU Denver prioritizes the institution's strategic trajectories, we must weave programmatic sustainability and curricular vitality into our overarching goals and objectives. Program viability ensures the efficient allocation of resources and the cultivation of distinctive academic offerings that resonate with

our institutional mission, vision, and strategic priorities. Simultaneously, curricular innovation serves as a cornerstone for differentiation, competitiveness, and relevance, positioning CU Denver as a hub of intellectual inquiry, social mobility, and societal advancement.

This report aims to elucidate key challenges, promising practices, and actionable recommendations derived from the deliberations of the Academic Program Viability and Curricular Innovation Working Group (see the list of working group members in Appendix A). By synthesizing insights garnered from diverse stakeholders and informed by best practices, this report endeavors to inform strategic decision-making within our institution.

The working group was charged with identifying and recommending key metrics and a protocol for flagging programs for further review to understand why their enrollments are low and/or trending downwards. This report details factors to consider, justification for each factor, and data sources that feed into a developed protocol for identifying programs needing further review and action. This report also describes how this protocol fits into already-established program review cycles.

While striving for comprehensiveness, it is essential to acknowledge the inherent limitations of this report. The complexity of program viability and curricular innovation necessitates nuanced and contextual analyses that may not be fully captured within these recommendations. Nonetheless, this report endeavors to offer a holistic overview and actionable insights that can serve as a springboard for further inquiry and realistic interventions that can enhance and support academic programs at CU Denver.

Values and Definitions that Guide the Work of Program Viability

The working group identified some central values to help ground conversations related to academic program viability and curricular innovation. These values include:

- **Creating an inclusive conversation and process:** This could look like engaging with shared governance both as a body and through various committee representatives; considering other groups that should join these conversations at different process stages; providing any budget implications to the Budget Priorities Committee (BPC) for consultation; and engaging other groups connected to academic programs to obtain their input.

- **Operating with transparency:** This could look like clarifying the process steps for program viability decisions and sharing information related to program viability freely and transparently both within and outside of departments.

- **Honoring and learning from the past:** This could look like considering existing policies and procedures to ensure alignment with program viability practices, suggesting revisions as needed, and seeking out lessons learned from past actions to improve

processes in the future.

- **Aligning with the Strategic Plan:** This could look like considering how institutional goals are tied to the success of particular programs and using the strategic plan as a variable to guide program decisions.

- **Engaging in data-informed processes and decision making:** This could look like providing access to the Decision Support Toolkit (DSTk) as well as other data sources to create broad and inclusive data analyses to better understand the factors impacting programs, as well as providing community-wide trainings on how to use these tools (see more in Recommendation # 3).

- **Making action-oriented recommendations:** This could look like making clear program viability recommendations aligned with decision-making processes that are transparent, with feedback loops to ensure that recommendations are being implemented with fidelity.

- **Viewing programs from a strengths-based perspective:** This could look like seeking opportunities for how to use curriculum innovation and partnerships to help programs thrive, as well as identifying promising practices from successful programs to share across schools and colleges.

Defining Academic Programs

For the purpose of this report and for program viability work, more generally, we are defining "programs" in alignment with Regent Law, Article 4 on Academic Organization and Program Planning, which uses the following language:

> *A degree program is a course of study leading to a degree at the bachelor's, master's, or doctoral level and may only be offered by an academic unit or a program within an academic unit.*

An academic degree programs sit within departments and/or schools and colleges. We recognize that the viability or a department or other academic unit must be viewed holistically, particularly as degree programs relate to the offering of things like minors, core curriculum, microcredentials, certificate programs, and other academic offerings that are valuable to the institution's curricular offerings.

Further, we want to acknowledge that while the number of students enrolled in a major in an academic degree program is important, it is not the sole determinant of its viability. Factors such as student credit hours (SCH) generated by courses offered to non-major students, alignment with strategic priorities, etc. shall also be considered (see more on this in Recommendation # 2).

Also, we recognize the importance of examining subplans and tracks within academic programs in relation to one another. We appreciate cases in which a program's health can be defined varyingly at the subplan level. For example, a program might include a successful subplan that is healthy as well as an unsuccessful subplan that might be recommended for refresh or discontinuation.

Values and Definitions that Guide the Work of Curricular Innovation

The working group also identified some central values to help ground conversations related to curricular innovation. These values include:

- **Sharing out best practices from "healthy" programs:** This could look like showcasing successful programs through campuswide information sessions, or creating other venues where best practices can be shared across departments and schools/colleges.

- **Making market intelligence actionable:** This could look like creating action plans for programs based on what is learned through market intelligence reports and departmental, school/college, and campus discussions.

- **Ensuring bureaucracy does not impede curricular innovation:** This could look like identifying challenges or bottlenecks to curricular innovation and assigning solutioning to a particular group or unit.

Defining Curricular Innovation

For the purpose of this report, curricular innovation refers to the intentional and strategic development of new approaches, methods, or structures within curriculums or programs with the goal of enhancing the learning experience or adapting to changing needs and contexts.

Curricular innovation could include:

- incorporating new technologies
- revising teaching methodologies
- drafting new teaching materials
- refreshing learning objectives
- introducing interdisciplinary approaches
- integrating real-world applications
- promoting critical thinking and creativity
- addressing diverse learning needs
- merging programs
- renaming programs
- testing new pedagogical approaches

Current State

In this section, we present an overview of the current state of our data landscapes, provide an overview of the current program review and program discontinuance processes as they are currently outlined in policy and procedure, share current promising practices that support academic program health, and describe obstacles and challenges that currently impede program viability.

Data Landscape

There are several sources of data that currently exist at CU Denver that can help us understand programs and program health. First, the Decision Support Toolkit (DSTk) is a tool that synthesizes institutional data from financial, academic (including research metrics), and HR data sources for the purpose of providing accessible and actionable information. Some examples of the data in the DSTk include:

- Trends in enrollment and credit hour production
- Student to staff and faculty to student ratios
- Budget expenditures at the college/school and department levels
- Course fill rates
- Student demographics and student success outcomes

Currently, all academic leaders from the department chair level and above have access to this tool and the data it synthesizes.

The Academic Program Review Dashboards are available to all CU Denver faculty and staff. They include all the quantitative data that is necessary to fill in a program review template. Some examples of these data include:

- Headcount
- Enrollment
- FTE in major
- Headcount in major
- Number of degrees awarded
- Credit hours taught by rank of faculty

An additional data source for academic programs is Lightcast™, which is a tool that provides market intelligence data via sources such as IPEDS, Bureau of Labor Statistics, and LinkedIn. Programs can also be compared with peers through market intelligence analysis. Alumni outcomes data is also available from the System Office. These data were purchased from Lightcast™.

Current Program Review Policies and Processes

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The current Program Review Process for undergraduate and graduate programs is made up of requirements from APS 1019:

> *"All degree programs shall be reviewed at least once every seven years. Each campus shall have policies defining degree program review procedures. These procedures shall be designed to identify strengths and weaknesses of each degree program and provide constructive options for program improvement. The ultimate goal of this policy is to promote and maintain high-quality degree programs that are administered efficiently. A degree program review schedule may be modified to coincide with a professional accreditation review."*

In addition to APS 1019 guidelines, the Program Review Process for undergraduate and graduate programs also includes requirements from CU Denver's policy on Degree Program Review (CAP 1000). This policy includes more details about the Program Review Process including its oversight by the Office of Academic Planning.

Happening every seven years, the Program Review Process includes:

- a self-study resulting in a report, which includes an overview of the program's strengths, challenges, opportunities, and goals for the next review period; these self-studies can also include recommendations for changes to the program
- engagement of a range of stakeholder groups that could include faculty members, students, staff, alumni, community members, and others
- a meeting with the Office of Academic Planning to discuss the results of the self-study

Current Timeline for Undergraduate and Graduate Program Review Process

September/October	Notification to programs of their review period
October	Office of Academic Planning meets with program directors going through the process to answer any questions about the process and provide information on data sources
October-February	Faculty members in the program create the self-study report
February 15	Program review reports are due internally to their deans' office
Mid-February through mid-March	Meetings are scheduled by the Office of Academic Planning with each program to review their self-study report
April 1	Deadline for final reports to the Office of Academic Planning

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Each year all programs that complete the Program Review Process are included in a summary report compiled by the Office of Academic Planning in the summer and submitted to the Vice President for Academic Affairs at the System Office. This summary report is then compiled with reports from the other CU campuses and presented each year to the Board of Regents and CU President.

Performance metrics included in the current **undergraduate** Program Review Process are as follows:

- Headcount enrollment in major
- Full-time equivalents in the major
- Student credit hours for courses in the major taken by students in the major
- Total number of credit hours
- Number of degrees awarded
- Credit hours taught by faculty rank
- Credit hours taught to non-majors
- Number of undergraduate courses and credit hours provided in the general education core
- Average GPA at graduation overall
- Average GPA at graduation for courses in the major
- Proportion of student enrolling in the program as first-time, full-time, or transfers
- Retention rate of first-time, full-time students
- Graduation rate of first-time, full-time students
- Retention and graduation rates of transfer students
- Average time to degree

Performance metrics included in the current **graduate** Program Review Process are as follows:

- Headcount enrollment in program
- Full-time equivalents in the program
- Student credit hours for courses in the program taken by students in the program
- Total number of credit hours
- Number of degrees awarded
- Credit hours taught by faculty rank
- Credit hours taught to non-program participants
- Average GPA at graduation overall
- Average GPA at graduation for courses in the program
- Proportion of student enrolling in the program as first-time, full-time, or transfers
- Number of part-time and full-time students
- Retention rates
- Graduation rates
- Average time to degree

- Number of faculty with graduate faculty appointments
- Number of faculty who take part in training students
- Number of faculty who have their first graduate faculty appointment in program
- Number of faculty who are tenure-eligible with regular graduate faculty appointments
- Number of faculty who are tenure-eligible with special graduate faculty appointments
- Number of IRC faculty with regular and special graduate faculty appointments
- A list of all enrollees for the past five years indicating program completion, stop out, graduation, and their plans for employment or further education
- Percentage of student cohort graduating

Annual Student Learning Outcome Assessment Process

As a component of the university's accreditation and continuous improvement process, each program is required to submit an annual assessment report to the academic assessment committee at the end of spring semester describing its assessment results and program modifications. Programs that are new to the process or have not submitted a recent report are required to also submit a planning report by the end of November.

While programs may use the report guides provided by the assessment committee, they may also use a different format that better serves their purposes (e.g., professional accreditation) as long as the program report describes modifications based on the direct assessments of student learning. Some programs report multiple assessment results for all of their learning outcomes, for example, while other programs focus in depth on assessment results for a small number of learning outcomes.

Current Program Discontinuance Considerations (CAP 1025 and APS 1015 Appendix A)

The following are non-exclusive lists of factors that are included in CU Denver and System policies that may be considered during review of a program being considered for discontinuance.

Budgetary constraints, resource allocation or other financial reasons:

- Actual or projected revenues and costs of the program including both direct and indirect costs;
- Potential cost savings from elimination of the program;
- The program's impact on the campus' fiscal health;
- Cost of investing in the program to achieve and maintain excellence;
- Performance data related to the program such as the cyclical nature of the discipline's relevance, multi-year trends and projections for enrollment, retention, completion, placements, impacts on other programs and capacity data such as student/faculty ratios, research productivity, programmatic cost benefit analysis, ability to generate income; or

- Other relevant factors that indicate that the program cannot be maintained due to budgetary constraints, resource allocations, or other financial reasons.

Educational reasons:

- Long-term state, regional and national needs;
- Relevance of the program to the state or region in terms of its cultural, historic, political, economic, or other social aspects;
- Relevance of the program as a support for, or as an integral part of, other campus or University academic and research programs;
- The quality of the campus' program in terms of the (a) faculty and staff, (b) students, (c) accreditation or program review, or (d) research and other facilities (library collections, laboratories, field support facilities, etc.); or
- Other relevant factors that indicate that the program cannot be maintained for academic reasons.

Strategic realignment reasons:

- Relevance of the program to the campus mission;
- Relevance of the program in the campus or college strategic plan (academic master plan);
- Value of the program to the state, CU System, and the relevant geographic area;
- Marketplace demand for the program;
- Program's role relative to other key programs at the campus; or
- The program cannot be maintained for strategic realignment reasons.

Promising Practices for Supporting Program Success

The working group identified the following current promising practices that serve as supports to program viability processes and curricular innovation:

- **Access to market intelligence data:** Having a centralized resource for analysis of market intelligence data that can be utilized for program viability discussions has been a helpful resource for departments and academic leaders.

- **Graduate recruitment and yield workshop:** Bringing together school/college teams with administrative and staff subject matter experts on recruitment and yield to create clear enrollment targets and yield plans is a positive step toward a collaborative strategic enrollment culture.

- **Enrollment-focused information sessions:** The recent launch of twice-annual campuswide enrollment updates shows a demonstrated commitment to data transparency and to engaging the campus as a whole in strategic conversations about

enrollment growth and strengthening retention.

- **Efforts at budget transparency:** Campus-wide efforts toward budget transparency through info sessions, memos, the budget realignment website, and other measures are helpful and appreciated as we continue to strategize about cost cutting measures that can shore up the institution's financial health, while also meeting our mission to create educational opportunities that work for all.

- **Role of shared governance:** Recent steps to incorporate RACI processes into campuswide initiatives to clarify roles and responsibilities can help shore up Regent Law and Policy, which states "faculty have the principal responsibility for decisions concerning pedagogy, curriculum, research, [and] scholarly or creative work" (Article 5.A.1.B) and "faculty shall collaborate with the campus and system administration in making recommendations or decisions on faculty personnel policies, administrative leadership, and resource allocation" (Policy 5.A.I (C)).

- **Strategic Plan:** The strategic plan serves as a guide for campus priorities around curriculum and innovation, particularly Goal 2 that indicates creating academic opportunities for lifelong learners.

Obstacles and Challenges for Supporting Program Success

The working group also identified the following current obstacles and challenges that serve as impediments to clear program viability processes and curricular innovation supports:

- **Inconsistent access to program data:** Currently, academic leaders choose who has access to the DSTk and this has created an inconsistent level of access across faculty members and staff.

- **Knowledge of relevant technologies (e.g. Slate):** There is inconsistent awareness and knowledge of how to use technologies and tools that can impact program viability and performance.

- **Lack of consistent partnership for recruitment, marketing, and student success:** Department chairs and program leaders need additional information about best practices in recruitment, marketing, and student success as well as their roles in fostering best practices.

- **Impact of marketing budget on marketing strategy:** The institution and its programs face limits based on marketing budget; it is possible that certain priorities could be forced by our marketing budget.

- **Shifts and evolution of state or national trends related to curricular areas:** Constantly evolving trends in disciplinary and industry-focused topics can create challenges for programs looking to keep up and innovate.

- **Length of program review template and report:** The first page of the program review template includes what is required by the Regent reporting requirement. An additional three pages of questions are also included for programs to address. To address these questions, most program review documents are 50-100 pages long. These reports are required to be completed every seven years.

- **Length of time between program review reports:** With program review cycles happening every seven years, it is challenging to include data or results from self-studies in decisioning around budget allocation and continuous improvement efforts. This timing can also impede cross-program comparisons. The length of time in between program review cycles also disincentivizes a data culture that includes regular program health conversations.

- **Lack of follow-up on program review recommendations and changes:** In our current process, if recommendations for change result from a program review process, there is no mechanism to follow-up or have accountability on whether those changes were implemented and/or the efficacy of those changes.

- **Lack of clarity for program review roles and responsibilities:** Understanding who has the authority to recommend changes and actions is an important component of a program review process that includes a lot of community members and stakeholders. In particular, the role of the department chair and faculty members have inconsistencies in the program review process across schools and colleges.

- **Separation of annual assessment reporting from program review:** Annual assessment reports that are created for each program are not currently integrated into program review cycles. These siloes obstruct the creation of a continuous program improvement process.

- **Program review process is mostly internal:** For programs that do not have accreditation requirements, there are no external evaluations of the program required as part of our current process. This focus on self-study can create biases in the Program Review Process since no external perspectives of the discipline or market are included.

Future State: Recommendations for Program Viability and Curricular Innovation

As we navigate the landscape of program viability and curricular innovation, we offer the following actionable recommendations that address fundamental questions guiding institutional decision-making.

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Recommendation # 1: Establish Guiding Principles for Program Viability that Encourage Curricular Innovation

The working group recommends that academic program viability conversations are open to more ideas than the duality of program growth or program closure. For example, program mergers, program re-naming, and program revision might all be forms of curricular innovation that could enhance program success. We encourage program viability conversations to center the following principles aimed at fostering curricular innovation and success:

Principle	Potential Discussion Topics
Strengthening clarity of program objectives	• How well does the program align with the goals of the institution? • To what extent is the program relevant in the evolving education landscape? • What adjustments are needed to the learning outcomes for this program?
Strengthening connection to emerging trends	• What are the industry demands and workforce needs in relation to this program? • What updates are needed to the curriculum based on recent technological advancements? • What updates are needed to the curriculum based on trends emerging in K-12 (specifically high school) curriculum?
Ensuring a student-centric approach	• What student engagement strategies are being employed in this program? • What opportunities exist within this program for personalized learning?
Incorporating innovative teaching methods	• How is the program leveraging technology to support learning outcomes for students? • What modality is most appropriate for this program? • What opportunities exist for applying interdisciplinary approaches and partnerships into the program?
Encouraging flexibility and adaptability	• How is the program adapting to changing educational needs? • What feedback loops exist to test and adjust approaches?
Keeping equity in mind	• How is faculty workload impacted by potential program changes?

	• How can student services and wrap-around supports create opportunities for more equity and student success?

It is recommended that although these conversations can happen at any time, these topics are revisited each year in collaboration with a review of the academic program health check data (see Recommendation # 5).

Recommendation # 2: Clarify the Metrics Used to Assess Program Viability

The working group recommends a multi-faceted approach to annualized program viability metrics. The first is through **institutional data** that can be automated and shared with department chairs and other constituents through the annual academic program health check (see more on this in Recommendation # 5). The second approach is through **directed departmental self-studies** that can be used to provide additional context that are not captured in the automated component of the academic program health check. The working group acknowledges the imperfection of quantitative metrics, therefore, there is the need for this contextual component.

We have organized metrics through a framework of "value drivers" that have been chosen because they significantly influence the creation or enhancement of value within the institution. Each value driver has associated metrics and specific data elements that can be viewed as key performance indicators (KPIs) that measure an academic program's effectiveness, efficiency, and overall success at various levels (e.g., degrees vs subplans).

For the first approach, we recommend a focus on the following values driver categories and associated metrics:

Value Driver	**Metric**
Student Outcomes	Retention
	Graduation
Prospective Student Interest	Applications
	Yield
Student Demand	Enrollment
Cost	Credit Hours
	Faculty Ratio

Each metric has one or more associated specific data elements that define the details of the data:

Metric	**Specific Data Element**
Retention	1yr retention rate of first-time, full-time students (Avg of F20-F22)
	1yr retention rate of new transfer students (Avg of F20-F22)
	1yr Retention rate of first-time, full-time URM students (Avg of F20-F22)

Graduation	Percentage of entering student cohort graduating (3 cohort avg; 6yr undergrad, 4yr masters, 8yr doctoral)
Applications	Number of external applicants to the program (% change F21-F23)
Yield	Yield of applicants to matriculant (% of applicants that matriculated F23)
Enrollment	Enrollment trends over time, overall (% change F21-F23)
	Enrollment trends over time, URM (% change F21-F23)
Credit Hours	FY 24 Cost per credit hour (by Department)
	Instructional SCHs (Fall 2023, by Department)
	Instructional SCHs 3yr% Change (Fall 2023, by Department)
Faculty Ratio	FY 24 Student/Instructional Faculty Ratio (by Department)

The working group reviewed a much longer list of value drivers, associated metrics, and specific data elements; however, the list was narrowed for the automated institutional data to those above. (The full list of value drivers, metrics and specific data elements considered and the process for narrowing are provided in Appendix E).

Metric Justification

Measuring **retention** is important for degree program viability because it directly impacts student enrollment, student success, resource utilization, financial stability, program reputation, graduation rates, student engagement, and institutional accountability. Measuring **graduation** rates is crucial for assessing degree program viability because it reflects student success, identifies areas for improvement, ensures accountability, and ultimately workforce preparation. By identifying factors that contribute to student retention and graduation and implementing targeted interventions, programs can improve quality and ensure the long-term viability and success of their degree programs.

Measuring external **applications** to degree programs and the **yield** of admitted students, meaning the percentage of accepted applicants who ultimately enroll, provides insight into program attractiveness, market demand, competitive positioning, recruitment strategies, resource allocation, and enrollment management.

Measuring headcount **enrollment**, which refers to the total number of students enrolled in a degree program, and **credit hour** production, which refers to the total number of credit hours generated by students enrolled in a degree program, are important for degree program viability because they impact resource allocation, financial stability, demand assessment, program marketing and recruitment, and student support services. By effectively managing enrollment numbers and credit hour production, institutions can ensure the success and sustainability of their degree programs.

Measuring the student-to-instructional **faculty ratio** is important for degree program viability because it impacts the quality of instruction, student engagement and success, retention and graduation rates, program reputation and attractiveness, faculty workload and satisfaction, accreditation and standards compliance, and resource allocation and planning.

We propose the following benchmarks for each specific data element:

- **Strong** aligned with the top 75% of CU Denver degree programs
- **Support Needed** between 10-25% of CU Denver degree programs
- **Significant Concern** lowest 10% of CU Denver degree programs

The specific data element benchmark values may adjust based on changes in program outcomes, however, below is a table of values based on the most recent data available.

Specific Data Element	10%	25%
1yr retention rate of first-time, full-time students (Avg of F20-F22)	52%	68%
1yr retention rate of new transfer students (Avg of F20-F22)	52%	71%
1yr Retention rate of first-time, full-time URM students (Avg of F20-F22)	51%	67%
Percentage of entering student cohort graduating (3 cohort avg; 6yr undergrad, 4yr masters, 8yr doctoral)	38%	54%
Number of external applicants to the program (% change F21-F23)	-56%	-35%
Yield of applicants to matriculant (% of applicants that matriculated F23)	10%	19%
Enrollment trends over time, overall (% change F21-F23)	-58%	-40%
Enrollment trends over time, URM (% change F21-F23)	-58%	-40%
FY 24 Cost per credit hour (by Department)*	$508	$287
Instructional SCHs (Fall 2023, by Department)	57	180
Instructional SCHs 3yr% Change (Fall 2023, by Department)	-31%	-24%
FY 24 Student/Instructional Faculty Ratio (by Department)	3.4	5.8

* Cost per credit hour is inversely/reverse coded since lower values are associated with viability

The second approach is through **directed departmental self-studies** completed as part of the academic program health check. These self-studies are meant to allow for flexibility in key value driver categories such how (1) research and creative work contributions, (2) alignment with the institutional strategic plan, (3) community engagement, and (4) competitive position help to ensure academic program health and viability. For this second approach, we are recommending a holistic rubric model that would allow the self-study to result in one of three tiers: strong, additional support needed, or area of concern.

For example, the **research and creative work contributions** self-study might be guided by something like the following:

Strong: Academic programs with research and creative work contributions that are deemed "healthy" are deeply involved in undergraduate research initiatives, providing mentorship, guidance, and opportunities for undergraduate students to engage in research activities. Faculty members demonstrate a commitment to advancing the academic program's mission and goals through their research and creative work endeavors on par with peer institutions. Their contributions not only enhance the department's reputation but also enrich the educational experiences of both graduate and undergraduate students. When possible given disciplinary constraints, faculty members should actively seek and secure externally funded

grants to support graduate student teaching assistants, ensuring the sustainability and quality of graduate education within the department.

Additional Support Needed: Academic programs whose research and creative work contributions require "additional support" have faculty members who engage in some activities that support the academic program's health but may need improvement or enhancement. For example, while faculty may secure externally funded grants occasionally, there is room for improvement in the consistency and success rate of grant acquisition. Similarly, their involvement in undergraduate research initiatives may be sporadic, with opportunities for further engagement and expansion. These academic programs show potential for enhancing contributions to support the academic program's health through increased focus and commitment to these research and creative work activities.

Area of Concern: Academic programs whose research and creative contributions fall into the "area of concern" have faculty members who rarely secure externally funded grants to support graduate student teaching assistants, which may negatively impact the department's ability to provide quality graduate education. Additionally, their involvement in undergraduate research initiatives is minimal or non-existent, missing opportunities to enrich the educational experiences of undergraduate students. These academic programs may need significant support and intervention to increase their engagement in research and creative work activities that support the academic program's health and contribute to the department's overall success and vitality.

The **alignment with the institutional strategic plan** self-study might be guided by something like the following:

Strong: Academic programs with contributions that support academic program health actively engage in activities aimed at serving diverse student populations, ensuring inclusivity and equity within the academic program, and helping to support a best place to work mentality. Additionally, they design and offer programs that address community needs, fostering meaningful partnerships and collaborations between the academic program and the broader community. These programs demonstrate a commitment to advancing the institution's strategic priorities and enhancing the overall health and vitality of the academic program.

Additional Support Needed: Academic programs that may require additional support engage in some activities aligned with the institution's strategic plan and goals, but may need improvement or enhancement. While they may make efforts to serve diverse student populations, there is room for improvement in the depth and effectiveness of their inclusivity initiatives. Similarly, their programs may partially address community needs, but there are opportunities for further development and expansion. These academic programs show potential for enhancing their contributions to align more closely with the institution's strategic plan through increased focus and commitment to these activities.

Area of Concern: Academic programs that fall into the "area of concern" category demonstrate a lack of engagement in activities aligned with the institution's strategic plan and goals. They rarely prioritize serving diverse student populations, which may hinder efforts to create an inclusive and equitable academic environment. Additionally, their programs may not effectively address community needs, missing opportunities to establish meaningful connections with external stakeholders. These academic programs may require significant support and intervention to align their contributions with the institution's strategic priorities and ensure the overall health and vitality of the academic program.

The **community engagement** self-study might be guided by something like the following:

Strong: Academic programs that demonstrate community engagement and support academic program health actively participate in service-learning initiatives, integrating community service into the curriculum to enhance student learning and community impact. Additionally, they establish and maintain industry advisory boards, fostering collaboration between the academic program and industry partners to ensure program relevance and alignment with industry needs. These academic programs demonstrate a commitment to community engagement and contribute significantly to the overall health and vitality of the academic program.

Additional Support Needed: Academic programs that may require additional support engage in some community engagement activities but may need improvement or enhancement. While they may participate in service-learning initiatives, there is room for improvement in the depth and effectiveness of their integration of community service into the curriculum. Similarly, their engagement with industry advisory boards may be sporadic, with opportunities for further development and collaboration. These academic programs show potential for enhancing their contributions to community engagement and academic program health through increased focus and commitment to these activities.

Area of Concern: Academic programs that fall into the "area of concern" for community engagement demonstrate a lack of engagement in activities that support these goals. They rarely participate in service-learning initiatives, missing opportunities to integrate community service into the curriculum and enhance student learning outcomes. Additionally, they may not establish industry advisory boards or engage with industry partners, limiting opportunities for program relevance and collaboration. These academic programs may require significant support and intervention to align their contributions with community engagement and academic program health goals.

For example, the **competitive position** self-study might be guided by something like the following:

Strong: Academic programs that exhibit a strong competitive position can provide evidence across various indicators. These programs consistently rank among the top in their field, nationally or regionally, indicating their quality and reputation. They possess a distinct Classification of Instructional Programs (CIP) code, accurately reflecting their specialization and

making them easily identifiable. Moreover, strong programs demonstrate robust growth in completions relative to peer institutions, produce a high number of completions compared to similar programs in the region, and face relatively few direct competitors. Despite changes in the educational landscape, they maintain a stable competitive environment and experience growth in enrollments while competitors may stagnate or decline.

Additional Support Needed: Academic programs requiring additional support may see fluctuations or slightly lower rankings compared to top-tier programs. While still competitive, these programs may share their CIP code with similar programs, experience moderate growth in completions, and produce a moderate number of completions compared to peers. Additionally, they face challenges from several institutions offering similar programs and may lack a stable competitive environment. Despite these challenges, with targeted support and strategic initiatives, these programs have the potential to strengthen their position and enhance their competitiveness.

Area of Concern: Academic programs facing significant challenges in maintaining a competitive position consistently rank lower than peers and may lack a distinct CIP code, making differentiation difficult. Moreover, they may experience stagnant or declining completion rates, produce a low number of completions compared to similar programs in the region, and face intense competition from numerous institutions. Significant increases in competitors threaten their market share, necessitating proactive measures to safeguard their position. With targeted interventions and strategic planning, programs of concern can work towards improving their competitive position and ensuring long-term sustainability.

The approach of combining institutionally collected metrics with directed program-level self-studies offers a structured framework to evaluate key value drivers, ensuring a comprehensive assessment of academic program health and viability, with outcomes categorized into distinct tiers for targeted intervention and improvement.

Recommendation # 3: Implement Comprehensive and Inclusive Data Literacy Professional Learning Opportunities that Support Program Health

Implementing comprehensive and inclusive data literacy professional learning opportunities is crucial for supporting academic program health in today's data-driven educational landscape. To ensure successful academic program viability conversations, it will be essential to address the needs of various stakeholders, including chairs and other decision-makers, faculty members, and the wider community.

*Education or Professional Development for Chairs and Academic Leaders***:** Department chairs and other academic leaders play a pivotal role in fostering a culture of data literacy within academic programs. They need education and professional development opportunities to understand the importance of data literacy in program viability and decision-making processes. Workshops, seminars, and group and/or individual training sessions focusing on data literacy fundamentals, data analysis techniques, and data-informed decision-making strategies should

be provided consistently. Additionally, department chairs and academic leaders should be educated on how to interpret and use data effectively to assess program health, identify areas for improvement, and make informed decisions regarding resource allocation and strategic planning.

*Data Literacy Training for Faculty and Staff***:** Faculty members and staff members that support academic programs also require data literacy training to enhance program viability. This training should encompass basic data literacy skills, such as understanding data types, understanding institutional data tools and dashboards, and understanding terms such as leading and lagging indicators. Furthermore, faculty members and staff members need support in integrating data-informed decision-making practices into their day-to-day activities, including curriculum development, student advising, and program evaluation. We also recommend that all faculty members receive access to the Decision Support Toolkit (DSTk).

*Public Information and Community Engagement***:** Transparency and communication with the community are essential aspects of implementing data literacy initiatives. Providing public information about the process steps involved in data collection, analysis, and decision-making helps build trust and credibility with the institutional community. This may include publishing reports or dashboards containing relevant program data, such as enrollment trends, student success rates, and program outcomes that are easily accessible to CU Denver community members. Additionally, community members should be informed about how their input and feedback are incorporated into decision-making processes, demonstrating a commitment to inclusive and participatory decision-making.

Overall, implementing comprehensive and inclusive data literacy professional learning opportunities requires a multi-faceted approach that addresses the needs of chairs, academic leaders, faculty, staff, and the wider institutional community. By providing targeted education, training, and public information, academic programs can enhance their data literacy capabilities and make informed and transparent decisions that support program health and success.

Recommendation # 4: Develop and Implement Decision-Making Guidelines for Academic Program Viability Processes

Developing and implementing comprehensive decision-making guidelines for academic program viability processes is an important step toward ensuring clarity, transparency, and efficacy within institutional shared governance structures. At the core of this recommendation is a call to clarify roles and responsibilities, thereby fostering a cohesive and informed decision-making framework that aligns with institutional goals and values, and honors the role of faculty and faculty shared governance bodies in holding primary responsibility for curricular decisions.

First and foremost, it is essential to delineate the roles of various stakeholders involved in program viability processes. This begins with identifying **deciders**, who hold the ultimate authority in making decisions regarding program viability. Deciders are typically high-level administrators or governing bodies vested with the responsibility of approving or discontinuing

academic programs. Clarifying the roles of **advisors** is equally crucial; these individuals provide expert insights and recommendations based on their disciplinary expertise or institutional knowledge, guiding decision-makers in assessing the viability and strategic relevance of academic programs.

Executive stakeholders, including senior administrators and department heads, play a pivotal role in advocating for programmatic initiatives aligned with institutional priorities and resource allocations. Their involvement ensures that decisions regarding program viability are grounded in strategic imperatives and institutional aspirations. Additionally, **recommenders** contribute valuable insights and analyses, presenting evidence-based arguments and proposals for consideration by decision-makers. Their input serves to inform deliberations and shape the trajectory of programmatic initiatives.

Supporters and **implementers** constitute another vital category of stakeholders whose roles must be clarified within the decision-making guidelines. These individuals or teams are tasked with being accountable for operationalizing decisions related to program viability, executing action plans, and managing logistical aspects of program development, refinement, or discontinuation. By delineating their responsibilities and providing necessary resources and support, CU Denver can facilitate more efficient transitions and mitigate potential challenges associated with programmatic changes.

Lastly, ensuring that all relevant stakeholders are adequately **informed** throughout the decision-making process is essential for fostering transparency and strengthening institutional trust. Informed stakeholders, including faculty members, staff, students, and external partners, possess valuable insights and perspectives that enrich deliberations and enhance the legitimacy of decisions. Establishing channels for effective communication and soliciting feedback from diverse constituencies are integral to promoting inclusivity and shared ownership of institutional decisions.

Role	**Suggested Community Members**
Deciders	Board of Regents
Recommenders	Deans, Provost, Chancellor
Advisors	Department Chairs, Associate Deans, Faculty, Staff, Shared Governance Leaders, Students
Executive Stakeholders	Provost team members, Cabinet members
Supporters and Implementers	Department Chairs, Faculty, Institutional offices (e.g. OIRE, TIPS, SESS, etc.)
Informed	Faculty, Students, Staff

By clarifying the comprehensive decision-making guidelines for academic program viability processes, CU Denver can better navigate the complexities of program decisions. Clarifying roles and responsibilities, engaging stakeholders, and fostering transparent communication are

foundational elements that underpin our shared governance structures and also ensure the alignment of programmatic initiatives with institutional mission and strategic objectives.

As part of this recommendation, we ask for a documented communication strategy created in collaboration with the Office of Academic Planning, UComm, faculty representatives, and others that takes into account the roles above and aligns them with the processes recommended throughout this report.

Recommendation # 5: Implement an Annual Health Check Process for all Academic Programs

All degree programs in the University of Colorado System are required to undergo a thorough program review at least every seven years (per APS 1019). In order to assist with more timely assessment and support of programs, we propose developing a process of annual academic program health checks for CU Denver. This process will include value drivers collected through both institutional data and directed self-study that the working group believes to be critical to the viability of CU Denver programming. Each value driver will be measured using targeted metrics and data to better quantify and analyze the performance of each program. This process will allow CU Denver to be nimbler in response to market and enrollment trends, and allow the institution to strategically leverage resources in service of our students and our financial health.

Annual Health Check Process

Annual program health checks will be completed through a collaboration between each program lead and Academic Planning each fall using existing program data, such as enrollment and retention metrics, as well as the results of directed self-studies. In some cases, it may be necessary to collect additional data beyond the annual health check to ensure a fully contextualized picture of program health.

The data collected as part of the annual program health check will be used to identify areas of relative strength and weakness for each program in relation to benchmark for each metric and self-study area. Initially, programs will be classified into tiers (see below). Program tiers will be used to identify the level of support required for each program. *Programs that are performing below benchmark in multiple metric and self-study areas would be considered less viable than programs performing well across the same areas.*

As part of the academic program health check process, it is required that data is shared within departments across program stakeholders including faculty and staff, and that discussions are held to think through any necessary changes that could lead to increases in a program's viability. Where possible, program data should be automated to minimize any additional departmental workload. However, automated metrics will also be allowed to be contextualized, as needed, with additional information that departments or programs might want to provide.

Programs with significant challenges across multiple value drivers and metrics may require significant support to identify opportunities to improve program health and, in some cases, to reassess the overall viability of the program.

The following program tiers are recommended:

Strong	Support Needed	Significant Concern
Program is below benchmark in only one or two areas	Program is below benchmark in three to five areas	Program is below benchmark in six or more areas

Recommendation # 6: Create a Tiered Support Model for all Academic Programs

Depending on the program tier that results from an academic program health check, we recommend that programs fall into one of the following three support levels:

Universal Tier: To ensure program health and ongoing program viability, every program (including those identified as Strong on the program health check) will receive support in the form of the annual program health check. All programs will also have access to the decision-support toolkit (DSTk) and have the option to request market intelligence data to support planning and decision-making.

Targeted Tier: Programs identified as Support Needed on the program health check will likely require additional support beyond that provided in the universal tier. This could include consultations with market intelligence, UComm, OIRE, SESS representatives, as well as additional conversations with academic leaders. Programs in this tier will develop strategic action plans to identify specific action steps they or other offices will take to improve program viability in several targeted areas with support from the Provost Team and/or other key collaborators across campus.

Intensive Tier: Program identified as Significant Concern on the program health check will require closer examination. In addition to receiving universal and targeted supports, programs in this tier will also be expected to engage in strategic discussions regarding the future viability of the program within their school/college as well as with members of the Provost Team. It is recommended that programs in this tier develop also action plans to improve program viability, unless it is determined that a program as it is currently offered is no longer viable.

Specific Areas of Support

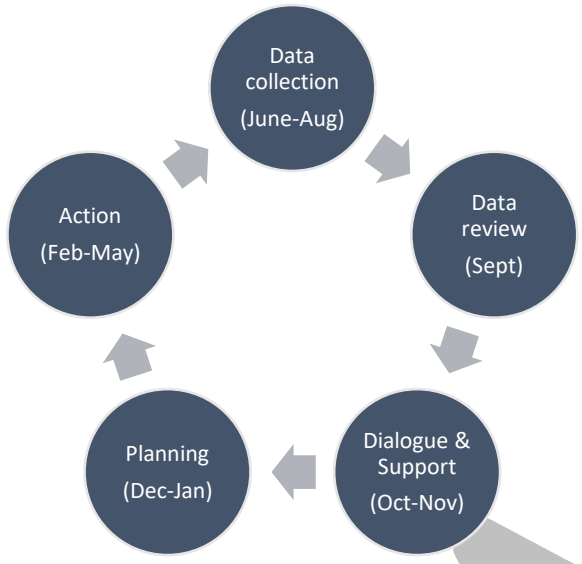
Program representatives will collaborate with appropriate administrative and operational units to implement targeted support opportunities that are most closely associated with the value driver(s) and metrics the program is struggling with. Within programs, points of contact will include department chairs/unit leads, program directors/advisors (e.g. a grad program director within a department), and deans/associate deans. The table below identifies potential teams who can provide support within each of the value drivers:

Value Driver	Support Opportunities	Point of Contact
Student Outcomes	• Complete data analysis of retention and graduation rates • Design and implement student success interventions • Conduct curricular mapping and refreshes	OIRE SESS TIPS
Cost	• Review a cost analysis of current program revenue and expenditures	OIRE Budget Office
Competitive Position	• Conduct additional market intelligence • Complete CIP code analysis • Consider industry partnerships	TIPS OIRE
Alignment with Strategic Plan	• Engage with the Strategic Planning team	Strategic Plan Team
Research	• Attend CU Denver Faculty Academy • Apply for seed grants	ORS
Prospective Student Interest	• Clearly outline the unique features and benefits of the program that differentiate it from similar offerings at other institutions • Conduct thorough research to identify the target audience for the program, considering demographics, geographic location, and psychographics (attitudes, interests, values) • Develop compelling and concise key messages that resonate with the target audience and communicate the program's value proposition • Create a clear and compelling call-to-action (CTA) that prompts prospective students to take a step toward conversion • Establish a dedicated recruitment team or designate specific faculty/staff members responsible for outreach and engagement with prospective students	Admissions UCOMM
Student Demand	• Define specific enrollment targets for the program and any metrics tied to program success. • Consider interdisciplinary collaborations	SESS TIPS

The annual health check process will support programs in development of their academic plans, both in terms of setting realistic targets for program growth based on current performance, and in terms of identifying strategic priorities for the academic year.

Proposed Timeline and Annual Cycle/Process

The working group recommends the following timeline for the annual health check process:



June-August: Data collection, refinement, and analysis

September: Initial data review, including faculty review and revision of draft annual health check reports

October-November: Dialogue and prescriptive support

December-January: Planning and implementation

February-May: Implementation and evaluation of actions

Recommendation # 7: Construct a Review and Appeals Process that Honors Shared Governance

Prior to the discontinuance of a program, the Faculty Assembly Budget Priority Committee shall review the case. Data used to determine a program is no longer viable shall be made available to the committee. As with the process for approving a new program proposal, a representative from the Budget and Finance Office as well as the respective school or college Dean and department chair/program director shall present the case to the committee.

In the event of a disagreement that results from a decision made on the basis of an academic program health check (including decisions for program changes that may not amount to a program discontinuance), we also recommend an appeals process where the Faculty Assembly Budget Priority Committee shall review the case. Data used to determine the decision shall be made available to the committee. The respective school or college Dean and department chair/program director shall present the case to the committee. This committee would make a recommendation based on their review of the appeal to uphold the original decision or to recommend an alternative course of action.

Recommendation # 8: Align Budget Model Principles and Revisions with Program Growth Incentives and Program Enhancement Needs

In order to ensure the continued viability and growth of academic programs, it is imperative to align budget model principles and revisions with both program growth incentives and program

enhancement needs. The current landscape of higher education demands a strategic allocation of resources that not only sustains existing programs but also incentivizes their growth and development in areas of critical importance. By integrating program growth incentives into the budget model principles, CU Denver can provide tangible support and recognition for programs that demonstrate potential for expansion and excellence.

This alignment may involve allocating resources based on enrollment growth, student achievement, or research activity, to programs that align with institutional priorities and strategic goals. This may also include the establishment of a strategic investment pool to accommodate the specific enhancement needs of academic programs, whether through targeted investments in infrastructure, marketing, technology, or curriculum development.

Appendices

A. List of Academic Program Viability and Curricular Innovation Working Group members
B. Working Group Meeting Schedule and Topics
C. Working Group Operating Principles Defined by Members
D. Key Questions Emerging from Working Group Discussions
E. Additional Contextual Information Related to Metrics
F. Acknowledgements

Appendix A: List of Working Group Members

Katie Linder (mentor) | Interim Vice Chancellor for Strategic Enrollment and Student Success; Associate Vice Chancellor for Academic Innovation and Strategy | Provost Office
Joanne Addison (co-facilitator) | Professor, English | CLAS
Wendy Bolyard (co-facilitator) | Clinical Associate Professor | SPA

Richard Allen | Senior Associate Dean, Academic and Strategic Planning | CLAS
Suzanne Arnold | Executive Director of ASPIRE to Teach | SEHD
Jody Beck | Associate Professor and Associate Dean | CAP
Yosef Bonaparte | Associate Professor of Finance | BUSN
Michelle Carpenter | Professor and Chair, Visual Arts | CAM
Lori Elliott | Clinical Associate Professor | SEHD
Jarod Hightower-Mills | International Services Specialist | OIA
Fernando Mancilla-David | Professor EE | CEDC
Beth Myers | Associate Vice Chancellor for Academic Planning and Institutional Effectiveness | Provost Office
Michael Rogers | Chair and Professor, Physics | CLAS
Ron Rorrer | Associate Professor and Chair ME | CEDC
Kristen Salsbury | CPE Program Manager | CLAS
Margaret Woodhull | Assistant Professor/Director | CLAS

Appendix B: Working Group Meeting Schedule and Topics

May 6, 2024

Session	Date	Topic/Presenter	Guiding Questions
1	Oct 23 (90 mins)	Review charge; presentation of already-existing structures, processes, protocols, and guidance for program review (Academic Planning)	- What is academic program viability? - What is the relationship between program viability and curricular innovation? - What already-existing processes and procedures current exist related to program viability?
2	Oct 30 (90 mins)	EAB presentation of program review considerations (EAB)	- What are some of the factors and considerations when designing processes for program review and health assessments?
3	Nov 6-9 (90 mins)	Review past Program Prioritization work and the work around program viability and curricular innovation that other institutions have already done	- What lessons can we learn about past experiences with this work at CU Denver? - What lessons can we learn from the work of other institutions?
4	Nov 13-17 (90 mins)	Review of existing data we have available to aid in program viability decisions, including market intelligence data (OIRE & Market Intelligence)	- What existing data do we have available to aid in program review, viability decisions, and health assessments?
5	Nov 27-Dec 1 (90 mins)	Presentation on pro formas and costs of program delivery (Budget Office)	- What are the costs of program delivery? - What are the elements of our pro forma process?
6	Dec 4-8 (90 mins)	Presentation on instructional costs data (OIRE, Academic Planning)	- How do we currently calculate instructional costs? - What data points would help us to make comparisons of instructional costs across programs?
7	Dec 11 (90 mins)	Presentation on existing steps, protocols, and timelines for program closure (Academic Planning)	- What are the existing steps for program closure?

8	Dec 14 (90 mins)	Synthesis of working group discussions to date; planning for spring meetings	- What are our take aways from the fall meetings that we have had as a working group? - What topics do we need to plan to cover in the spring? - What feedback do you have on process steps so far?
9	Jan 22 (90 mins)	Discussion of community member mapping for influence and impact; communication planning for Spring term	- Who is most impacted by the program viability work? - Who needs to influence the program viability work? - How do we want to engage the larger community in the working group process and recommendations?
10	Jan 29 (90 mins)	Graduate Recruitment presenting on recruitment and yield work for graduate programs; review of working group report outline and discussion of drafting process and next steps	- What organizational components do we want to use in our report/ recommendations? - What are the main topics or areas that we want to cover in our report/recommendations?
11	Feb 5 (90 mins)	Presentation by UComm team on marketing strategy and tactics	- What are our current efforts around marketing programs both broadly and programmatically? - How are decisions about program marketing made? - What data is used to decide what programs receive additional marketing dollars? - Who is involved in the decisions about how programs are marketed?
12	Feb 12 (90 mins)	Review of working group report draft	- Does this section of the report/recommendations adequately address the topic and reflect the thinking of the working group?
13	Feb 19 (90 mins)	Review of working group report draft	- Does this section of the report/recommendations adequately address the topic and

			reflect the thinking of the working group?
14	Feb 26 (90 mins)	Review of working group report draft	- Does this section of the report/recommendations adequately address the topic and reflect the thinking of the working group?
15	Mar 4 (90 mins)	RAPID training with EAB	- What decision making processes might we want to incorporate into our recommendations?
16	Mar 11 (90 mins)	Metrics discussion	- What metrics do we want to include in the annual health assessment?
17	Mar 25 (90 mins)	Decision making frameworks discussion	- What decision making frameworks make sense to include in our report recommendations?
18	Apr 1 (90 mins)	Decision making framework recommendation review and discussion of already-existing appeal process for program discontinuance	- What decision making frameworks make sense to include in our report recommendations? - What are the already-existing steps and processes for appeals to program viability decisions? - Do we want to include a recommendation in our report regarding appeals?
19	Apr 8 (90 mins)	Review of working group report draft & revisions	- What revisions do we want to incorporate into our report/ recommendations based on feedback from the community? - What additional community groups needs to offer their feedback on the report/ recommendations in summer and fall 2024? - What level of work will the working group need to continue in the summer and fall of 2024?
21	Apr 22 (90 mins)	Metrics discussion and review of metrics baselines	- What metrics do we want to include in the annual health assessment?

22	Apr 29 (90 mins)	Final report draft discussion & group celebration!	- What metrics do we want to include in the annual health assessment?

Appendix C: Working Group Operating Principles Defined by Members

1. Create an inclusive conversation and process:
    a. Could look like: engage with shared governance both as a body and through various committee representatives; consider other groups that should join this conversation; provide any budget implications to BPC for consultation; engaging other groups like chairs to hear their input
2. Operate with transparency:
    a. Could look like: information will be freely shared and transparently for others outside of the group through the monthly updates and through working group members sharing updates with their constituencies
3. Honor and learn from the past:
    a. Could look like: existing policies and procedures will be considered as group recommendations are drafted to ensure action can be taken; lessons learned from past actions will be honored in our process
4. Alignment with Strategic Plan:
    a. Could look like: considering which institutional goals are tied to the recommendations of the working group; using the strategic plan to guide the recommendations of the working group
5. Data-informed process and decision making:
    a. Could look like: providing access to the DSTk for all working group members; including data as a variable in working group recommendations
6. Action-oriented recommendations:
    a. Could look like: an eye toward implementation and what feedback loops would help us to ensure that recommendations are being implemented with fidelity
7. View programs from a strengths-based perspective:

a. Could look like: look for opportunities about how to use curriculum innovation to help programs thrive; keep thriving in mind as a goal

Appendix D: Key Questions Emerging from Working Group Discussions

Bigger Questions, Values and Definitions to Guide the Work

- What shared values will guide this work (e.g., transparency, integrity, diversity of opinions)?
- When we talk about program viability, how do we define programs?
  - How are programs connected to departments in terms of viability questions?
- What will help us as an institution collectively understand when we need to do things differently with programs?
- What are our hypotheses or beliefs about what matters to program viability?
- What would it mean to have "thriving" departments?
- Do we believe that there is ever a condition where an existing program should be discontinued?

Metrics Questions

- How will we use the DSTk in the larger work of program viability?
- What are the levers we need to pull to increase enrollment, retention, or other program performance metrics?
- Is there a combination of principles and data points that we can use?
- What mechanisms can we implement to ensure that faculty have access to data that is tied to program viability?
- What are the metrics that would be use to reach a determination about any program?
  - Does this program meet disciplinary standards of quality?
  - Does this program attract 'sufficient' numbers of students?
  - Does this program align with current or projected employer demand?
  - Does this program generate sufficient revenue to cover the cost of delivery?
  - Is this program critical to the mission of the university?
  - Are there additional programs that the university does not currently offer that might be more responsive to student demand or employer needs?
- What are the signals of "loss of relevance" of a program that might signal a need to sunset something?

Process and Stakeholders

- Do we need a stakeholder map about program viability and decision making?
- Who makes decisions about programs and at what level?
- How do we build in lots of opportunities for conversation about what needs to happen to turn things around if programs were struggling?
- What is the role of learning outcomes in deciding how to approach program viability?

- How do we use innovating and looking at programs from different perspectives to help them become more healthy if they need change?
    - What can we identify that could help programs that are not healthy become healthier? (has the institution done all that it can to help a program become healthier?)
- How is a program's health connected to or impacting other programs? (e.g. Mechanical Engineering and Physics)
- What is the time frame that departments need to be given to turn programs around?

Support for Recommendations

- Do we have the structures in place to support the recommendations that we are creating?
- What data literacy training is needed to help with success in program viability? Who needs training, education, or support with data literacy and data-informed decision making?
- What public information do we need to provide to the community in terms of process steps, data, etc.?
- What education or professional development is needed in this area for chairs or other stakeholders?

Appendix E: Additional Contextual Information Related to Metrics

The working group used a comprehensive approach, discussing all value drivers, metrics, and specific data elements relevant to assessing the viability of academic programs at CU Denver (see Table A).

Value Drivers *+ Essential Questions*	**Metrics** *performance metrics to assess value drivers*	**Specific Data Elements** *Exact data to be collected*
Student Outcomes *Do students pursue this program? How have trends in student demand changed?*	Degrees	Count of degrees awarded by degree type (major/program)
		Time to degree
	Graduation	Graduation rate of first-time, full-time students
		Graduation rate of transfer students
		Average time to degree
		Percentage of student cohort graduating
	GPA	Average GPA at graduation overall
		Average GPA at graduation for courses in the major / program
	Retention	Retention rate of first-time, full-time students
		Retention rate of transfer students
		Attrition of declared majors
	Employment	Employment or earnings for graduates 6 months after graduation

		Employment or earnings for graduates 10-years after graduation
Cost *How much does it cost the institution to offer this program?*	Credit Hours	Cost per credit hour
		Change in cost per credit hour
		Credit hours taught to non-majors / non-program participants
		Number of undergraduate courses and credit hours provided in the general education core
	Budget expenditures	Administrative overhead
		Equipment procurement of maintenance costs
		Institution subsidy of program ($ and/or %)
	Faculty and Staff	Ratios of students to staff, faculty to student
		FTE in major
		Credit hours taught by rank of faculty
Competitive Position *How does this program compare to similar programs at peer institutions?*	Standing	Program ranking
	Completions	Growth in completions relative to peers
		Total number of completions relative to peers
	Competitors	Number of competitors in region
		Change in number of competitors in region
		Change in enrollments at competitors
Community Engagement *To what extend does this program engage the broader community?*	Community service	Community service hours completed by students, faculty or staff
	Experiential learning	Internships, field experiences, or clinical placements completed by students
	Faculty memberships	Faculty membership in local nonprofit boards, local government positions, or employer partnership activities
Research *To what extent does this program support the institution's research goals?*	Publications	Number of publications
		Number of publications in top journals
	Awards and Expenditures	Number or total value of research grants or awards
		Total (or per capita) research expenditures
	Citations	Number of research citations
	Productivity	Lab space productivity
Diversity, Equity & Inclusion *To what extent does this program successfully serve students from underrepresented groups?*	Enrollment	Number of students from underrepresented groups enrolled
	Parity in student outcomes	Graduation rates for students from underrepresented groups
		Time to degree for students from underrepresented groups
	Diversity of faculty and staff	Number of program/department faculty from underrepresented groups
		Number of program/department staff from underrepresented groups
	Retention	Retention of students from underrepresented groups

Prospective Student Interest *What role does this program play in bringing students to the institution?*	Applications	Retention in programs for students from underrepresented groups
		Number of external applicants to the program
	Transfer Students	Number of students who express interest in the program during the application process
	Inquiries	Number of transfer students who enter the program
Student Demand *Do students pursue this program? How have trends in student demand changed?*	Headcount	Number of prospective students who inquire about the program
		Headcount enrollment in major / grad program
	Enrollment	Full-time equivalents in the major / grad program
		Proportion of student enrolling in the program as first-time, full-time, or transfers
		Number of part-time and full-time students
		Enrollment trends over time
		Course fill rates
	Credit hours	Student credit hours for courses in the major / grad program taken by students in the major
		Total number of student credit hours
		Change in total number of student credit hours
	Majors	Total number of majors
		Change in the number of majors
		Number of applicants to each major
Faculty	Faculty Appointments	Number of faculty with graduate faculty appointments
		Number of faculty who have their first graduate faculty appointment in program
		Number of faculty who are tenure-eligible with regular graduate faculty appointments
		Number of faculty who are tenure-eligible with special graduate faculty appointments
		Number of IRC faculty with regular and special graduate faculty appointments
	Faculty engagement with students	Number of faculty who take part in training students

Table A: List of original value drivers, metrics, and specific data elements

There was documentation of which data elements were available from various sources (i.e. Slate, Campus Solutions, CU Data COGNOS reports, University Dashboards, DSTk, Lightcast, Alumni Outcomes, etc.) and which were not available but would be important to collect for a holistic review (see Table B).

May 6, 2024

Metrics to Assess Value Drivers	Data Elements	Data Sources and Uses				
		DSTk	Program Review Dashboards	Program Discontinuance Appendix Considerations	University Dashboards	Other:
Student Outcomes						
Degrees	Count of degrees awarded by degree type (major/program)	X	X	Completion	X	
	Time to degree	X	X		X	
Enrollment	Average enrollment numbers for required courses in program	X		Enrollment		
Graduation	Graduation rate of first-time, full-time students	X	X		X	
	Graduation rate of transfer students	X	X		X	
	Average time to degree	X	X		X	
	Percentage of student cohort graduating		X		X	
GPA	Average GPA at graduation overall					
	Average GPA at graduation for courses in the major / program					
Retention	Retention rate of first-time, full-time students		X	Retention		
	Retention rate of transfer students		X			
	Attrition of declared majors		X			
Employment	Employment or earnings for graduates 6 months after graduation			Placements		Alumni Outcomes
	Employment or earnings for graduates 10-years after graduation					
Cost						
Credit Hours	Cost per credit hour	X		Actual or projected revenues and costs of the		
	Change in cost per credit hour	X				
	Credit hours taught to non-majors / non-program participants		X			

	Number of undergraduate courses and credit hours provided in the general education core		X	program including both direct and indirect costs		
Budget expenditures	Administrative overhead	X				
	Equipment procurement of maintenance costs					
	Institution subsidy of program ($ and/or %)					
Faculty and Staff	Ratios of students to staff, faculty to student	X		X		
	FTE in major	X	X		X	
	Credit hours taught by rank of faculty	X	X		X	
	Number of TAs or Grad Assistants used in the program					

Table B: Documentation of which data elements were available from various sources

Through extensive deliberation, each was thoroughly discussed, drawing on the diverse perspectives and expertise within the group. The group was then asked to rank the metrics most applicable to CU Denver's programs using a Qualtrics survey. The results were tabulated and presented back.

Based on this the Office of Institutional Research and Effectiveness created a draft dashboard that was used to further refine and narrow the list of data elements. The working group suggested a much simpler dashboard with gauges for each data element and the possibility of indices for related metrics (i.e. could we use an index for retention rather than multiple separate retention rates by demographic group).

At a subsequent meeting the working group looked at the data elements along with their calculated benchmarks, with example data from real but anonymized CU Denver programs. This led to further discussion by the working group. The goal is to provide a solid foundation for informed decision-making and continuous improvement efforts at the program-level, however much of the discussion was at the department-level.

The recommended value drivers, metrics and specific data elements presented with their associated benchmarks in Recommendation 2 are the result of this iterative process. The table below lists the comprehensive list of value drivers, metrics and specific data elements that were considered by the working group.

Appendix F: Acknowledgements

The authors wish to acknowledge the valuable assistance provided by a number of colleagues and offices including presentations and information shared with the working group throughout the last academic year. These units and offices include:

- EAB
- Market Intelligence
- Academic Planning
- Graduate Recruitment
- OIRE
- UComm
- Budget Office

In addition to reviewing CU Denver processes and practices, the working group also reviewed external processes and practices from other institutions of higher education; this external review was for the process of gauging best practices along with lessons learned.

The working group would also like to acknowledge that ChatGPT, an AI language model developed by OpenAI, was used for ideation and brainstorming during the drafting process of this report. ChatGPT was not utilized for any of the report contents related to CU Denver-specific data, or any of the metrics recommendations.

While we are thankful for all of the contributions noted above, the working group members take full responsibility and accountability for the report's contents and recommendations.