



CO L O R A D O

**Colorado Commission on
Higher Education**

Department of Higher Education

CCHE AGENDA

February 5, 2021

**Colorado Department of Higher Education
ZOOM Video Conference**

**[https://us02web.zoom.us/j/81652444736?
pwd=czVpNjBPQUFYazFZQmdsSHg3cjB
jZz09](https://us02web.zoom.us/j/81652444736?pwd=czVpNjBPQUFYazFZQmdsSHg3cjBjZz09)**

**BUSINESS MEETING
1:00pm – 4:30pm**

1600 Broadway, Suite 2200 • Denver, Colorado 80202 • (303) 862.3001

DR. ANGIE PACCIONE, EXECUTIVE DIRECTOR



COLORADO

Colorado Commission on
Higher Education

Department of Higher Education

Vanecia Kerr, Chair
Sarah Kendall Hughes, Vice-Chair
Paul Berrick Abramson
Teresa Kostenbauer
Tom McGimpsey
Steven Meyer
Charlotte Olena
Brittany Stich
Steven Trujillo
Eric Tucker

Colorado Commission on Higher Education

February 5, 2021

Colorado Department of Higher Education

ZOOM Teleconference Only

Denver, Colorado

11:30am -12:30pm

COMMISSIONER & ADVISOR WORK SESSION

- CCHE – CDHE Communication Best Practices – *Vanecia Kerr, Sarah Hughes, Dr. Ben Boggs*
- Proposed COSI legislation – *Shelley Banker and Chloe Figg*
- CCHE Capital Construction & Renovation Scoring Criteria – *Lauren Gilliland*

1:00 – 4:00pm

BUSINESS MEETING

I. Opening Business

- A. Attendance
- B. Approval of the Minutes for the December 3, 2020 Commission Meeting
- C. Reports
 - i. Chair
 - ii. Vice-Chair
 - iii. Commissioners
 - iv. Commission Standing Committees
 - v. Advisors
- D. Executive Director Report
- E. Public Comment

II. Consent Items

- A. Approval of Bachelor of Applied Science Degree in Health Informatics at Community College of Denver – *Dr. Chris Rasmussen*
- B. Approval of Bachelor of Applied Science Degree in Cannabis Science and Operations at Community College of Denver – *Dr. Chris Rasmussen*
- C. Approval of Associate of Applied Science Degree in Cannabis Business at Community College of Denver – *Dr. Chris Rasmussen*
- D. Approval of Commission Standards and Procedures for Implementation of House Bill 19-1206 (Developmental Education and Supplemental Academic Instruction) – *Dr. Chris Rasmussen*
- E. Recommend Approval of Reauthorization of Educator Preparation Unit at Rocky Mountain College of Art and Design – *Dr. Brittany Lane*



III. Action Items

- A. Approve CCHE Capital Construction and Renovation Scoring Criteria -
Lauren Gilliland

IV. Discussion Items

- A. Impacts of the Pandemic -*Dr. Kim Poast, Dr. Landon Pirius,
Dr. Kathryn Regio Dr. Linda Van Doren, Dr. Russ Rothamer,
Carl Einhaus*

Representatives of the Colorado Community College System, Colorado Mountain College, and Aims Community College will discuss the impact of the pandemic on enrollment, retention, and student success, and how these institutions are navigating and changing in this new environment.

V. Commission Initiatives

- A. Annual Report to the Commission on the Effect of Prior Learning Assessment on Student Progression and Completion – *Carl Einhaus and Christina Carrillo, with guest presenters Alberto Teixeira and Paul DeCecco, Pikes Peak Community College*





**Minutes of the Colorado Commission on Higher Education (CCHE) Meeting
Via ZOOM Teleconference
December 3, 2020**

BUSINESS MEETING

Chair Vanecia Kerr called the business meeting to order at 1:01p.m.

I. Opening Business

A. Attendance

Commissioners attending: Chair Vanecia Kerr, Commissioners Berrick Abramson, Luis Colon, Sarah Hughes, Teresa Kostenbauer, Tom McGimpsey, Steven Meyer, Charley Olena, Brittany Stich, Steven Trujillo, Eric Tucker.

Advisors attending: Wayne Artis, Mark Cavanaugh, Brad Baca, David Olguin, Landon Pirijs, Leah Porter, Misti Ruthven

B. Minutes

Commissioner McGimpsey moved to approve the minutes for the October 22, 2020 meeting. Seconded by Commissioner Tucker, the motion passed unanimously.

C. Election of Vice Chair

Commissioner Hughes was nominated and elected to serve as Vice Chair.

D. Chair, Vice-Chair, Commissioners and Advisors Reports

Chair Vanecia Kerr Report – Chair Kerr thanked Commissioner McGimpsey for his service as chair and congratulated him on his new role in his professional organization. She also recognized and thanked Commissioner Hughes for her work plan presentation at the work session and for her ongoing commitment to guiding the commission in this work.

Fiscal Affairs & Audit Committee – Commissioner Tucker reported that the committee met in November. The governor’s budget was discussed with a focus



on drafting criteria for universities that were looking to increase their tuition beyond the 3 percent caps. General guidelines were drafted and are ready for commission discussion as needed. The Hanover study was also discussed. The report is well structured, with data and findings now being tended to by the Department. One of the primary report findings is that the Colorado IEGs are funded at a lower level than peer institutions in other states. From a commission standpoint, continued advocacy for their improved funding (as it become available) is important. The committee would like to develop a working group to use the Hanover research to help inform the development of step 1 and step 3 of the algorithm being used to help allocate funding to IHEs. A meeting of stakeholders to discuss capital scoring criteria will take place on December 11th and all commissioners are invited to attend.

Student Success & Academic Affairs Committee – Commissioner Stich reminded commissioners that the committee meets two weeks before CCHE meetings and all are welcome to attend. The committee discussed trying to have conversation to move items to the commission consent agenda as part of a new appeals process which all will see later in today’s agenda. The committee discussed the test optional admissions policy and its merits, potential implications. The committee spent time reviewing the new website and implementation plan for the CCHE innovation policy that passed last month. The website is live and all are eager to see applications from our institutions. The committee has a smaller working group to focus on this. The committee also will establish a smaller working group to discuss the impacts of Covid on enrollment, retention, or instruction. The group also will discuss the implications of these impacts on the K-12 sector and how that might impact higher education.

Executive Director Report – Deputy Director, Inta Morris presented Dr. Paccione’s report in her absence. In November the COSI board awarded over \$3.3 million in funds to complete the first application period for 2021 matching student scholarship grant. With all the applications approved, there was a total of approximately \$6.6 million awarded to students across the state all leveraged to a 1:1 match. The Department’s educator preparation program convened a statewide virtual faculty conference focused on community partnerships and culturally responsive education. As a result of that convening, faculty from nine colleges and universities have agreed to be part of a community of practice to learn how to incorporate “FFSCP” (Faith, Family, School and Community Partnerships in educator preparation). October 13th was Colorado free application day and final numbers are being compiled. We had 55,000 Coloradoans take advantage to apply on that day. That is an increase of 10,400 over the previous year. Study Colorado hosted its first virtual international student fair and all of the Colorado institutions participated – with over 200 students from 27 countries involved. The International Open Education Conference was held virtually in November and Colorado is regarded as a leading state in the nation in this effort. The conference hosted more than 1,500 participants worldwide and 42 Colorado educators presented. The My Colorado Journey platform received a small grant that will



allow us to incorporate a check mark feature that will allow for outside funding and thus grow the platform. Campus leaders met with Kacie Wolfe, the Governor's COVID policy person to review state trends. At this time, if trends continue, Colorado will exceed hospital capacity. That trend line is being countered by the restrictions that have been put in place. All of the institutions are scheduled to begin spring semester in mid-January and bring students back from across the country. The state is not recommending that the institutions do any one specific thing because every situation is different, but all are encouraged to look at the tradeoffs between bringing the students back in mid-January or pushing back the in-person start by two to three to four weeks.

E. Public Comment –No public comment

II. Consent Items

A. Degree Authorization Act – ECPI University – Recommendation of Approval for Renewal of Authorization as a Place of Business – *Heather DeLange*

B. Approval of Supplemental for Adjusted NWC Certificate of Participation Payment Schedule - *Lauren Gilliland*

C. Degree Authorization Act – Capella University – Recommendation of Approval for Authorization as a Place of Business (with no instruction) – *Heather DeLange*

D. Recommend Approval of Reauthorization of Educator Preparation Programs at Metropolitan State University of Denver – *Dr. Brittany Lane*

E. Proposed Revisions to CCHE Policy VI F State-Funded Student Financial Aid to include CASFA and HB 19-1196 processes- *Emily Orr*

Commissioner McGimpsey moved to approve Consent Items A - E. The motion was seconded by Commissioner Abramson and passed unanimously.

III. Action Items

A. Proposed Changes to CCHE Policy I, L: Statewide Transfer and GT Pathways Policy – *Dr. Chris Rasmussen*

Commissioner McGimpsey moved and Commissioner Meyer seconded to accept staff recommendations to revise the policy. Commissioner Stich offered a friendly amendment to revise Section 3.11 of the policy to read “For the purposes of this policy, “native student” means a student at a Colorado public four-year institution who did not transfer from a Colorado community or local-district college under a statewide transfer agreement.” Commissioners McGimpsey and Meyer accepted the friendly amendment, and the motion passed unanimously.



IV. Discussion Items

A. Degree Authorization Act – Proposed Additions to CCHE Policy Section I, Part J, Regarding State Authorization Reciprocity – *Heather DeLange*

Heather DeLange, Director of the Office of Private Postsecondary Education, provided an overview of the proposed language to the current policy. This included a definition of the approved interstate reciprocity program in which Colorado is a member as well as a process by which institutions may appeal a denial in reciprocity participation. The process includes a three-person committee consisting of the Executive Director, the Chair of the Standing Committee for Academic and Student Affairs, and the Academic Council advisory committee member. This committee will review the decision made by the state portal entity and will provide a final decision regarding institutional participation.

Commissioner Abramson moved that this item be placed for action on the agenda. The motion was seconded by Commissioner Stich and passed unanimously. Commissioner McGimpsey moved to approve this item, seconded by Commissioner Colon and passed unanimously.

B. Proposed Resolution to Extend Implementation Deadline for HB19-1206 Due to Exceptional Circumstances – *Dr. Chris Rasmussen*

Dr. Rasmussen described the “exceptional circumstances” brought by the CoVID pandemic that merited an extension of the deadline for institutions to comply with provisions of HB19-1206 regarding placement of students into developmental education courses. The resolution would pre-approve a one-year extension to any institution that requested it (from Fall 2022 to Fall 2023), with authority to grant the extension delegated to the CDHE executive director or her designee. Institutions could still request an extension of up to two years, per statute.

Commissioner McGimpsey moved that the item be placed for action on the agenda. The motion was seconded by Commissioner Tucker and passed unanimously. Commissioner McGimpsey moved to approve this item. Commissioner Stich seconded the motion which passed unanimously

C. Open Education Resources Notification Implementation Guidelines-*Spencer Ellis*

Staff briefed the Commission on the provision from HB18-1331, which requires institutions to notify students prior to course registrations of the courses which use OER and other low-cost materials (starting fall 2021). Staff shared the guidelines memo with the Commission (created in conjunction with the OER Council), which provides institutions with guidance during implementation. Staff asked CCHE to discuss and officially endorse the guidance memo.



Commissioner McGimpey moved that this item be placed for action on the agenda. The motion was seconded by Commissioner Abramson and passed unanimously. Commissioner McGimpey moved to approve this item. Commissioner Tucker seconded the motion and it passed unanimously

V. Commission Initiatives

A. Equity Champions Coalition Equity Report – *Shelley Banker*

Shelley Banker, Senior Advisor to the Office of Educational Equity, provided an overview of the upcoming Equity Champions Coalition (ECC) Equity Report. She presented with David Olguin, Student Advisor to Commission and Co-Chair and Student Liaison to CDHE Equity Champions Coalition, and Dr. Ryan Ross, Associate Vice Chancellor - Student Affairs Equity and Inclusion for Colorado Community College System and Co-Chair to CDHE Equity Champions Coalition. Staff and co-chairs provided an overview of the ECC, the report, and the timeline of the report's release. This will occur in mid-December. CCHE also received information on the implementation and potential CCHE follow up action.

B. 2021 Legislative Session - Budget & Legislative Agenda – *Jason Schrock and Chloe Figg*

Jason Schrock, Chief Financial Officer, provided an overview of the Department's budget items in the Governor's budget request that was submitted to the legislature on November 2. He discussed the state funding request for public higher education institutions and the tuition spending authority request -- the two main budget requests for the Department every year. The state funding request restores funding to the FY 2019-20 level, allocating all of the funding through step 2 of the funding formula, while the tuition request caps resident tuition increases at 3 percent; institutions have the ability to discuss exceeding this cap with the CCHE. Mr. Schrock also briefly discussed other Department budget highlights of the Governor's request.

The meeting adjourned at 3:01pm.



TOPIC: APPROVAL OF BACHELOR OF APPLIED SCIENCE DEGREE IN HEALTH INFORMATICS AT COMMUNITY COLLEGE OF DENVER

PREPARED BY: DR. CHRIS RASMUSSEN, SENIOR DIRECTOR OF ACADEMIC PATHWAYS AND INNOVATION

I. SUMMARY

This consent item recommends approval for the Community College of Denver (CCD) to offer a Bachelor of Applied Science (BAS) degree in Health Informatics.

II. BACKGROUND

Colorado Community College System institutions, as well as Aims Community College, received state authorization to propose Bachelor of Applied Science degrees through Senate Bill 14-004, which allows the State Board for Community Colleges and Occupational Education (SBCCOE) and the board of Trustees for Aims Community College to seek approval from the Commission for technical, career, and workforce development Bachelor of Applied Science degree programs and specifies the criteria to be used in evaluating said requests. Among other criteria, the boards must demonstrate workforce and student demand for the degree program and cost-effectiveness to the student and to the system.

Community colleges are required to submit proposals for new degree programs to the Department, which are then reviewed by staff relative to the statutory requirements listed elsewhere in this agenda item under “Statutory Authority” (pursuant to C.R.S. §23-1-133. Commission directive - Bachelor of Applied Science degree programs – community colleges – approval). As part of its due diligence, the staff engages the Academic Council as key stakeholders and subject matter experts on matters of academic policy and programs. (The Academic Council is an advisory body and not a decision-making one.) If the proposed degree program meets statutory requirements, it is recommended for approval to the Commission. If the proposed degree program does not meet statutory requirements, staff advises the institution to revise the program and proposal accordingly.

It is helpful to note the difference between the BAS and other types of degrees. The Associate or Bachelor of Arts (AA or BA) and the Associate or Bachelor of Science (AS or BS) are grounded in the traditional liberal arts and sciences, with a general education core inclusive of courses in written and oral communication, mathematics, arts and humanities, social and behavioral sciences and natural/physical sciences. Applied degrees, such as the Associate or Bachelor of Applied Science (AAS or BAS), are career and technically oriented and designed to focus on professional preparation for a specific vocation.

Since applied degrees are usually aligned with a specific profession, are based on demonstrated in-demand workforce needs, and feature more applied learning outcomes, their general education component is usually contextualized within the career. As a result, many but not all BAS degrees have received waivers from the Commission allowing the sponsoring institution to create an academic program that does not include the full GT Pathways curriculum. CCD has not requested a GT Pathways waiver for the proposed BAS degree program in Health Informatics.

III. STAFF ANALYSIS

[Commission Policy Section I, Part V](#) lists the statutory criteria to be addressed by an institution proposing a Bachelor of Applied Science degree program. Response to these criteria are included in the attached document CCD submitted to SBCCOE on October 23, 2020 (Attachment A). SBCCOE approved the proposed degree program at its November 11, 2020 meeting. Pending approval from the Higher Learning Commission, the new degree is scheduled to be offered in the Fall 2021 academic term.

Department staff opened a public comment period on the proposed program on November 5, 2020, and closed the public comment period on December 7, 2020. The proposed program was placed on the Academic Council agenda on December 8, 2020, with representatives of CCD available to answer questions. No comments were received expressing concerns. Department staff determined that CCD has met the required statutory criteria and recommends Commission approval of the proposed program.

IV. STAFF RECOMMENDATIONS

Staff recommends that the Commission approve the Bachelor of Applied Science degree in Heather Informatics at the Community College of Denver.

V. STATUTORY AUTHORITY

C.R.S. §23-1-133

Commission directive - Bachelor of Applied Science degree programs - community colleges – approval

(1) (a) The state board for community colleges and occupational education, referred to in this section as the "state board", shall submit to the commission for its approval technical, career, and workforce development Bachelor of Applied Science degree programs to be offered at one or more community colleges within the state system. The commission shall consider the following criteria in determining whether to approve a bachelor of applied science degree program:

(I) Whether the state board provides data demonstrating workforce and student demand for the degree program;

(II) The regional and professional accreditation requirements for the degree program, if applicable, and whether the college can satisfy those requirements, as appropriate, at both the institutional and program levels;

(III) Whether the state board can demonstrate that providing the degree program within the community college system is cost-effective for the student and the community college system;

(IV) Whether the state board can demonstrate that the degree program is sufficiently distinguishable from:

(A) An existing degree program at a state four-year institution of higher education that is

provided to a student who resides in the community college's geographic service area, as defined by the commission pursuant to section 23-1-109 (2), without the student having to change his or her residence; or

(B) A degree program that has been successfully offered previously in conjunction with a state four-year institution of higher education, which degree program will be reinstated sooner than the degree program could be offered by the community college; and

(V) Whether the bachelor of applied science degree program could be provided through a statewide transfer agreement pursuant to section 23-1-108 (7) with an accredited state four-year institution in the community college's geographic service area or with an accredited state four-year institution of higher education that has a statewide service area, as defined by the commission pursuant to section 23-1-109 (2), that will deliver an existing bachelor of applied science program in the community college's geographic service area sooner than the degree program could be offered by the community college.

(b) In addition, in determining whether to approve a Bachelor of Applied Science degree program, the commission:

(I) Shall consider whether the state board has met the criteria set forth in subparagraphs (I) to (IV) of paragraph (a) of this subsection (1) and whether the proposed bachelor of applied science degree program is in the best interests of the state of Colorado;

(II) Shall consult with the state board and state four-year institutions of higher education concerning whether the collaboration described in subparagraph (V) of paragraph (a) of this subsection (1) is feasible; and

(III) May consult with any state four-year institution of higher education that shares the same geographic service area, as defined by the commission pursuant to section 23-1-109 (2), concerning the proposed degree program to inform the commission of any anticipated system-wide effects of the new degree program.

VI. ATTACHMENTS

Attachment A: CCD Submission to SBCCOE for BAS in Health Informatics

Community College of Denver
Bachelor of Applied Science in Health Informatics
10/23/2020

TOPIC: Bachelor of Applied Science in Health Informatics

PRESENTED BY: Everette Freeman, Ed.D., President – Community College of Denver

Landon Pirius, Ph.D., Vice Chancellor Academic & Student Affairs, Student Affairs

RELATIONSHIP TO THE STRATEGIC PLAN:

- Transform the student experience
- Create education without barriers through transformational partnerships
- Redefine our value proposition through accessibility, affordability, quality, accountability, resource development, and operational excellence

EXPLANATION:

Pursuant to CCCS’s role and mission (§23-60-201, C.R.S.), CCCS may offer technical, career, and workforce development Bachelor of Applied Science (BAS) degree programs. Authority for the Colorado Community College System to offer BAS degrees was made possible by SB14-004 (Community College Four-year Programs), which was signed by the Governor on February 27, 2014.

§23-60-201, C.R.S., states, in part:

Each community college may offer two-year degree programs with or without academic designation, AND, UPON APPROVAL OF THE BOARD PURSUANT TO SECTION 23-60-211, MAY OFFER TECHNICAL, CAREER, AND WORKFORCE DEVELOPMENT BACHELOR OF APPLIED SCIENCE DEGREE PROGRAMS. No college shall impose admission requirements upon any student. The objects of the community and technical colleges shall be to provide educational programs to fill the occupational needs of youth and adults in career and technical fields, two-year transfer educational programs to qualify students for admission to the junior year at other colleges and universities, basic skills, workforce development, and a broad range of personal and career education for adults, AND TECHNICAL, CAREER, AND WORKFORCE DEVELOPMENT BACHELOR OF APPLIED SCIENCE DEGREE PROGRAMS ESTABLISHED PURSUANT TO SECTION 23-60-211, THAT ADDRESS THE NEEDS OF THE COMMUNITY WITHIN EACH COMMUNITY COLLEGE SERVICE AREA.

This proposal seeks Board approval for a BAS degree in Health Informatics for the Community College of Denver (CCD). The legislative criteria for approval of a BAS degree are set forth below,

with a summary of the supporting data demonstrating that the criteria have been met. Additional information is provided in the appendices.

1. Data demonstrate workforce and student demand for the degree program.

The Bureau of Labor Statistics (BLS) projects that the healthcare industry will grow by 2.4 million jobs between 2016 and 2026. A portion of this demand requires workers who can organize, manage, and analyze the influx of healthcare data and information created as a result of this rapidly growing patient base. As healthcare facilities must adopt electronic health records (EHRs), they will need employees who understand how to design and manage this technology.

This degree prepares students for a number of occupations including Healthcare Data Analyst, Clinical Data Analyst, Health Information Specialist, Healthcare Information Administrator, Medical Records Administrator, Medical Information Administrator, Chief Medical Information Officer, Director of Clinical Informatics, Health IT Consultants, and Medical and Health Service Manager. Additional occupations denoted in the employer survey (Appendix A) that CCD conducted in January 2020 include: Business Analyst, Product Developer, Clinical Auditor, Coding Integrity Analyst, Application Analyst, Data Manager, Data Architect, Systems Architect, Data Analytics, IT Manager, Data Scientist, Developer, Solutions engineer, Project Management, Program Manager, Portfolio Manager, Clinical Informaticist, Clinical Informatics Analyst, Senior Analysts, and Lead Analyst.

The Community College of Denver hired Interact Communications to research program feasibility for its proposed Bachelor of Applied Science in Health Informatics (Appendix B). Overall data and results were gathered using a combination of Colorado and federal government statistical data and websites summarizing the government data. The overall average score of all elements of the environmental scan was 6.3, on a 1-7 scale. This ranks between “positive” (6) and “very positive” (7) on Interacts’ rating system. “Availability of jobs” averaged a 6.4 rating, and “employer variety” averaged a 6.6 rating (between “positive and very positive”). “Salaries by location” averaged at 5.4 (between “slightly positive” and “positive”). “CCD vs. competitors” had the highest average rating, at 6.7 (between “positive” and “very positive”).

Health informatics jobs are tracked directly by the US Department of Labor and other job data sites under several separate categories, and some of these jobs cover other related business administration and information technology positions.

Jobs related to health informatics are tracked using various job codes by the North American Industry Classification System (NAICS).

Below are the employment and growth trends of occupations mentioned in the employer survey and others related to health informatics based on industries that utilize a combination of computer systems, data, information, and education with a focus in clinical, health, and medical services.

Medical and Health Services Managers

Examples of reported job titles include: Clinical Director, Health Information Management Corporate Director, Health Information Management Director, Health Manager, Mental Health Program Manager, Nurse Manager, Nursing Director, Practice Administrator, and Program Manager.

Labor market reports indicate that Medical and Health Services Managers is one of the top high growing jobs in the Metro Denver area with an average of 273 annual job openings. Among Medical and Health Services Managers are Health Information Managers. The profession is expected to grow by 30% between 2016 and 2026.

Medical and Health Services Managers Employment Projections - Colorado				
Population on July 1, 2018	Employment 2016	Projected Employment 2026	Projected Annual Job Openings 2016-2026	Percent Change
5,695,564 (1.74% of US)	4,710 employees	6,140 employees	530	+30%

Medical and Health Services Managers Employment Projections - Local Area			
Local Area	Estimated Population 2018	Ratio of CO Population to Jobs Available Per Year	Estimated Annual Job Openings 2016-2026
Denver/Aurora/Lakewood MSA (est. 51.49% CO population)	2,932,415	10,746:1	272.9
City of Denver (est. 12.58% CO population)	716,492		66.7

Informatics Nurse Specialists (Computer System Analyst)

Informatics Nurse Specialists apply knowledge of nursing and informatics to assist in the design, development, and ongoing modification of computerized health care systems. Many educate staff and assist in problem solving to promote the implementation of the health care system. Computer Systems Analysts analyze science, engineering, business, and other data processing problems to implement and improve computer systems. They analyze user requirements, procedures, and problems to automate or improve existing systems and review computer system capabilities, workflow, and scheduling limitations. May analyze or recommend commercially available software.

Examples of reported job titles include: Clinical Informatics Analyst, Clinical Informatics Nurse, Clinical Informatics Specialist, Clinical Informatics Systems Analyst, Digital Diabetes Research Officer, Nursing Informatics Officer, Nursing Informatics Specialist, Nursing Information Systems Coordinator, Registered Nurse Clinical Information Systems Coordinator (RN Clinical Information Systems Coordinator), and Registered Nurse Clinical Information Systems Educator (RN Clinical Information Systems Educator.) Computer Systems Analysts job titles include: Applications Analyst, Business Analyst, Business Systems Analyst, Computer Analyst, Computer Systems Analyst, Computer Systems Consultant, Information Systems Analyst (ISA), Information Technology Analyst (IT Analyst), and Systems Analyst.

Computer Systems Analysts Employment Projections - Colorado				
Population on July 1, 2018	Employment 2016	Projected Employment 2026	Projected Annual Job Openings 2016-2026	Percent Change
5,695,564 (1.74% of US)	9,320 employees	12,470 employees	990	+34%

Computer Systems Analysts Employment Projections - Local Area			
Local Area	Estimated Population 2018	Ratio of CO Population to Jobs Available Per Year	Estimated Annual Job Openings 2016-2026
Denver/Aurora/Lakewood MSA (est. 51.49% CO population)	2,932,415	5,753:1	509.7
City of Denver (est. 12.58% CO population)	716,492		124.5

Computer and Information Systems Managers

Computer and Information Systems Managers plan, direct, or coordinate activities in such fields as electronic data processing, information systems, systems analysis, and computer programming.

Examples of reported job titles include: Application Development Director, Computing Services Director, Data Processing Manager, Information Systems Director (IS Director), Information Systems Manager (IS Manager), Information Systems Supervisor (IS Supervisor), Information Technology Director (IT Director), Information Technology Manager (IT Manager), MIS Director (Management Information Systems Director), and Technical Services Manager.

Medical and Health Services Managers Employment Projections - Colorado				
Population on July 1, 2018	Employment 2016	Projected Employment 2026	Projected Annual Job Openings 2016-2026	Percent Change
5,695,564 (1.74% of US)	4,710 employees	6,140 employees	530	+30%

Medical and Health Services Managers Employment Projections - Local Area			
Local Area	Estimated Population 2018	Ratio of CO Population to Jobs Available Per Year	Estimated Annual Job Openings 2016-2026
Denver/Aurora/Lakewood MSA (est. 51.49% CO population)	2,932,415	10,746:1	272.9
City of Denver (est. 12.58% CO population)	716,492		66.7

Clinical Data Managers (Statisticians)

Clinical Data Managers apply knowledge of health care and database management to analyze clinical data, and to identify and report trends.

Examples of reported job titles include: Clinical Data Managers, Clinical Data Associate, Clinical Data Management Associate Director (CDM Associate Director), Clinical Data Management Director (CDM Management Director), Clinical Data Management Manager (CDM Manager), Clinical Data Manager,

Clinical Informatics Manager, Clinical Research Associate, Data Deliverables Manager, Data Management Manager, Data Management Specialist. Sample of reported job title related to statistics include: Demographer, Mathematical Statistician, Psychometric Consultant, Quantitative Methodologist, Research Scientist, Researcher, Statistical Analyst, Statistical Consultant, Statistical Reporting Analyst, Statistician

Statisticians Employment Projections - Colorado				
Population on July 1, 2018	Employment 2016	Projected Employment 2026	Projected Annual Job Openings 2016-2026	Percent Change
5,695,564 (1.74% of US)	500 employees	720 employees	60	+46%

Statisticians Employment Projections - Local Area			
Local Area	Estimated Population 2018	Ratio of CO Population to Jobs Available Per Year	Estimated Annual Job Openings 2016-2026
Denver/Aurora/Lakewood MSA (est. 51.49% CO population)	2,932,415	94,926:1	30.9
City of Denver (est. 12.58% CO population)	716,492		7.5

Medical Records and Health Information Technicians (Medical Dosimetrists, Medical Records Specialists, and Health Technologists and Technicians, All Other)

Medical Records and Health Information Technicians compile, process, and maintain medical records of hospital and clinic patients in a manner consistent with medical, administrative, ethical, legal, and regulatory requirements of the health care system. They process, maintain, compile, and report patient information for health requirements and standards in a manner consistent with the healthcare industry's numerical coding system.

Examples of reported job titles include: Coder, Health Information Clerk, Health Information Specialist, Health Information Technician (Health Information Tech), Medical Records Analyst, Medical Records Clerk, Medical Records Coordinator, Medical Records Director, Medical Records Technician (Medical Records Tech), Registered Health Information Technician (RHIT).

Medical Dosimetrists, Medical Records Specialists, and Health Technologists and Technicians, All Other Employment Projections - Colorado				
Population on July 1, 2018	Employment 2016	Projected Employment 2026	Projected Annual Job Openings 2016-2026	Percent Change
5,695,564 (1.74% of US)	2,790 employees	3,590 employees	250	+29%

Medical Dosimetrists, Medical Records Specialists, and Health Technologists and Technicians, All Other Employment Projections - Local Area			
Local Area	Estimated Population 2018	Ratio of CO Population to Jobs Available Per Year	Estimated Annual Job Openings 2016-2026
Denver/Aurora/Lakewood MSA (est. 51.49% CO population)	2,932,415	22,782:1	128.7
City of Denver (est. 12.58% CO population)	716,492		31.4

Health Educators

Health Educators provide and manage health education programs that help individuals, families, and their communities maximize and maintain healthy lifestyles. They collect and analyze data to identify community needs prior to planning, implementing, monitoring, and evaluating programs designed to encourage healthy lifestyles, policies, and environments. Health educators may serve as a resource to assist individuals, other healthcare workers, or the community, and may administer fiscal resources for health education programs.

Examples of reported job titles include: Certified Diabetes Educator, Clinical Instructor, Community Health Consultant, Education Coordinator, Health Education Coordinator, Health Education Specialist, Health Educator, Health Promotion Specialist, Public Health Educator, Public Information Officer.

Health Educators Employment Projections - Colorado				
Population on July 1, 2018	Employment 2016	Projected Employment 2026	Projected Annual Job Openings 2016-2026	Percent Change
5,695,564 (1.74% of US)	860 employees	1,090 employees	130	+27%

Health Educators Employment Projections - Local Area			
Local Area	Estimated Population 2018	Ratio of CO Population to Jobs Available Per Year	Estimated Annual Job Openings 2016-2026
Denver/Aurora/Lakewood MSA (est. 51.49% CO population)	2,932,415	43,812:1	66.9
City of Denver (est. 12.58% CO population)	716,492		16.4

The level of education necessary for new hires in each of the professions above was usually “bachelor’s degree and higher,” though some had entry-level jobs that required associate- or certificate-level training for entry.

This data and the growing trends for employment in health-related information system jobs demonstrate that the Health Informatics program will be successful.

In addition to the environmental scan and labor market analysis, Interact Communications conducted in depth phone interviews with potential employers (Appendix B.) Fifteen employers from a variety of locations in Colorado (and most were located in the Denver metropolitan area) were interviewed. Almost all respondents estimated the need for new employees with BAS degrees in Health Informatics to be growing. 93.3% of respondent anticipated that job opportunities in their industry will become available in the next five years for graduates of a BAS in Health Informatics. Most of the comments indicated that many of these companies currently hire new employees with bachelor’s-degree level training to positions related to health informatics. 100% of the respondents believe that the coursework proposed in the BAS Health Informatics program has the right mix of knowledge and skills to make its graduates employable at their business or at other similar

businesses. 60% of respondents indicated that they are willing to utilize CCD's proposed program for professional development or certification renewal training. The employer's responses and the growing trends for employment in health-related and other computer and information systems jobs suggest that the our proposed Healthcare Informatics program is likely to be successful.

In the spring and summer of 2020, CCD distributed an employer survey and conducted a number of focus groups to gauge employers' interest in the proposed degree and determine the competencies and skills needed to create a highly valued degree. Representatives from a variety of healthcare systems including Centura Health, Children's Hospital Colorado, the Colorado Regional Health Information Organization (CORHIO), State of Colorado-Office of eHealth Innovation, Colorado Rural Health Center, University of Colorado School of Medicine, and Colorado Health Institute employers completed the survey, participated in our focus groups, and were highly supportive of the proposed program. They indicated their commitment to guiding the curriculum development, teaching in the program, participating in the programs' Advisory Committee, and offering internship sites for this program. The survey identified the necessary competencies and skills to be included in the curriculum (Appendix A.) Focus groups conducted by CCD in the spring and summer of 2020 (Meeting minutes are Appendix C) validated the research findings and further clarified the skills and competencies needed in this emerging area.

To assess student demand for the degree, CCD collected surveys from current students and recent graduates. Out of the 271 students completed the survey, 55 students were interested in pursuing a Bachelor of Applied Science (BAS) degree in Health Informatics. An additional of 39 students were interested in both Health Informatics BAS and Cannabis Science and Operations BAS (another proposed BAS degree). Full report can be found in Appendix D.

2. The regional and professional accreditation requirements for the degree program, if applicable, have been met.

Regional accreditation. This program will require approval by the Higher Learning Commission (HLC). CCD has drafted and will submit the HLC *BAS Degree Request for Degree Approval and Substantive Change Application* upon receiving all appropriate System and State approvals of the program.

3. Providing the degree program within the Community College System is cost-effective for the students and the Community College System.

Supporting data. CCD's Bachelor of Applied Science (BAS) degree in Health Informatics offers a cost-effective degree completion option. The existing associate degree feeder programs serve as the first two years of the BAS program. Upon admission to the program, students will need only 60 credit hours including general education and Health Informatics-specific courses to meet the Colorado Department of Higher Education's requirement of 120 credit hours for a baccalaureate degree. The degree completion approach is a cost-effective way for students to obtain a bachelor's degree, offering access to advanced career opportunities. The table below illustrates how CCD's tuition and

fees for the BAS in Health Informatics compare to published tuition and fees rates at other institutions that offer similar bachelor's degrees. **Note - comparative program costs in the chart below reflect 2020-2021 rates and do not include room and board required by some four-year institutions.*

COLLEGE	Program	In State Tuition	Out of State Tuition
CCD	Healthcare Informatics	\$26,482.90	\$28,741.15
MSU	Healthcare Information Systems	\$57,226.60	\$125,110.60
CCD	Healthcare Informatics	\$26,482.90	\$28,741.15
REGIS	Health Care Administration	\$67,200.00	\$67,200.00
CCD	Healthcare Informatics	\$26,482.90	\$28,741.15
CTU	Healthcare Management -Health Informatics	\$61,570.00	\$61,570.00
CCD	Healthcare Informatics	\$26,482.90	\$28,741.15
Louisiana Tech U	Health Informatics and Information Manage	\$121,620.00	\$121,620.00
CCD	Healthcare Informatics	\$26,482.90	\$28,741.15
U-South Carolina	Health Infromatics	\$53,238.00	\$105,528.00
CCD	Healthcare Informatics	\$26,482.90	\$28,741.15
UM / Olemiss	Health Informatics & Mgmt	\$47,589.60	\$128,949.60

CCD prepared a cost-benefit analysis for the degree (See p. 10). CCD projects that the BAS Health Informatics will break even within two years without any negative effects on operations of other academic programs.

Program budget assumptions. CCD expects 30 students for the first year using conservative estimates based on student surveys and Interact feasibility study.

Revenue projections are based on the 300- and 400-level HCI courses only and do not include income or expenses associated with offering general education electives or any of the courses associated with the first 60 credits in the associate degrees that this program build on. Tuition will be charged at the online rate with and high cost course fees will be assessed.

Enrollment

Thirty part-time students (a conservative estimate; there is a lot of interest in this degree based on students surveys as shown in appendix D.) will be enrolled in the first year. We do allow for 5% annual attrition in our projections.. Based on these assumptions, 30 students will be enrolled in the first year. In the second year, 59 students will be enrolled (29 continuing students + 30 new incoming students). Using the same assumptions as above, 87 students will be enrolled in the third year. In year four, it is projected that 28 students will graduate and 30 new students will enroll, inclusive of 5% attrition, for a total of 87 students. Using the same rationale, the total number of students in year five and beyond will be approximately 87.

Personnel

CCD has a current full-time faculty who will serve as the program Director beginning July 1st, 2021. The Director will provide oversight of the instructional and enrollment management operations. In addition, CCD also has current full-time faculty with expertise and credentials to teach in the program. CCD may need to hire adjunct instructors with specific expertise in some subject areas. We will monitor for any additional faculty needs as enrollment increases.

Salaries and benefits for faculty and adjuncts are projected to increase 2.5% based on the regional consumer price index (CPI).

Instructional Operating Expenses

Instructional material and supplies that are integral to the success of the degree is represented in the Operating line item in the budget. Additional items under Operating include marketing, a feasibility study conducted by a Interact Communications, professional development, curriculum development, and official functions including advisory board meetings.

Non-Instructional Operating Expenses

All other services integral to the success of students are represented in the Non-Instructional Operating Expenses line item in the budget. These include academic success coaching, retention coordination, academic advising, career placement, library services, tutoring, technical services and support, equipment depreciation, physical space operations, and fiscal and human resources services necessary for supporting students, faculty, and staff. Courses in the proposed program will be offered primarily online minimizing burden on physical facilities. The practicum course and the internship may involve the use of some offsite facilities.

Full Program Cost-Benefit Analysis

On the following page is a cost benefit analysis for the full program. The program begins to make an annual profit in Year 2, Fiscal Year 2022-23 and has paid back the investment the college will make in the program by Year 3, Fiscal Year 2023-24.

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Community College of Denver							
Health Informatics							
Bachelor of Applied Science Degree							
COST / BENEFIT ANALYSIS							
		Fiscal Year					
		Prep Year	Year 1	Year 2	Year 3	Year 4	Year 5
REVENUES:		2020-21	2021-2022	2022-2023	2023-2024	2024-2025	2025-2026
Tuition - Resident Online			165,816	320,169	486,139	500,729	515,754
State Funding (COF)			25,200	48,657	73,888	76,099	78,380
	Total Tuition		191,016	368,826	560,027	576,828	594,134
Registration Fee			1,324	2,669	4,033	4,134	4,238
High Cost Course Fees			1,375	5,722	10,357	10,616	10,882
	Total Other Revenue		2,698	8,390	14,391	14,751	15,119
	TOTAL REVENUE		193,714	377,216	574,418	591,579	609,253
EXPENSES:							
Salaries/Benefits:							
Administrative - Salaries							
Program Director		0	75,000	76,875	78,797	80,767	82,786
Administrative - Benefits		0	27,750	28,444	29,155	29,884	30,631
Adjunct - Salary		0	0	11,637	31,654	32,445	33,257
Adjunct - Benefits		0	0	2,607	7,091	7,268	7,449
Faculty Curriculum Development		11,914	12,212	1,589	1,629	1,670	1,712
	Subtotal Salary/Benefits	11,914	114,962	121,152	148,326	152,034	155,835
Operating Expenses:							
Instructional Supplies/Resources		0	0	12,000	12,000	12,000	12,000
Consultant - Course Designer		0	5,000	5,000	0	0	0
Program Marketing		0	5,000	5,000	5,000	5,000	5,000
Contract Expense - Interact Feasibility Study		15,000	0	0	0	0	0
Prof. Development & Travel		0	5,000	5,000	5,000	5,000	5,000
Official Functions - Advisory Boards		0	500	500	500	500	500
Non-Instructional Operating Expenses			116,753	216,828	322,461	322,461	322,461
	Subtotal Program Operating Expenses	15,000	132,253	244,328	344,961	344,961	344,961
	TOTAL EXPENSES	26,914	247,215	365,479	493,287	496,995	500,796
	YEARLY PROFIT (LOSS)	(26,914)	(53,501)	11,737	81,131	94,584	108,457
	FTE		21	39	58	58	58
	CUMULATIVE PROFIT (LOSS)	(26,914)	(80,414)	(68,677)	12,454	107,038	215,495
	CUMULATIVE PROFIT (LOSS) Excluding Prep Year		(53,501)	(41,763)	39,368	133,952	242,408

4. The degree program is sufficiently distinguishable from: a) an existing degree program at a state four-year institution of higher education that is provided to a student who resides in the community college’s geographic service area, as defined by the Commission pursuant to Section 23-1-109 (2), without the student having to change his or her residence, or b) a degree program that has been successfully offered previously in conjunction with a state four-year institution of higher education, which degree program will be reinstated sooner than the degree program could be offered by the community college.

Supporting data.

The program’s external feasibility study assessed existing state and regional programs to determine if there were competitors. According the Interact Environmental Scan Report, there is only one expensive private institution offers a similar bachelor’s degree program (Colorado Technical University).

Health Informatics (HI) and Health Information Management (HIM) have common areas, they are two distinct career fields. Both fields share the commonality that they focus on healthcare technology and data. However, HI focuses on what goes on behind-the-scenes to develop the data tools while HIM professionals work more closely with the actual application of the systems that are created by HI professionals. The learning outcomes of an HI program are different than the learning outcomes of an HIM program. Health Informatics is the intersection of information technology, computer science, and healthcare. HI professionals not only analyze patient data, but create new and improved ways of collecting, storing and managing this data, ultimately with the goal of improving outcomes, increasing efficiency and decreasing costs. Health Informatics specialists not only analyze patient data, they also design information systems, evaluate effectiveness of existing health informatics processes, evaluate impact of information on clinical processes, facilitate communication between departments regarding IT requirements and other regulatory matters, and implement tools to make patient care and processes more effective through data use. On the other hand, HIM professionals’ main responsibilities include protecting and managing patient health information, which can include lab results, imaging scans, medical histories, nursing notes, coding information to obtain reimbursement, ensuring compliance with government regulations for data, and protecting the security and privacy of patient health data.

	Health Information Management	Health Informatics
Definition	<ul style="list-style-type: none"> The practice of acquiring, analyzing and protecting digital and traditional medical information vital to providing quality patient care. 	<ul style="list-style-type: none"> The science of using data, information and knowledge to improve human health and the delivery of health care services.

Key focus of responsibility	<ul style="list-style-type: none"> • Focuses on management of personal health information in hospitals and other health organizations to enhance the quality of care delivered to patients. • Processing of medical records related to billing, patient privacy, data governance and regulatory compliance. • Emphasizes tasks related to terminology, coding, transcription and overall records management related to the business of health care. 	<ul style="list-style-type: none"> • Focuses on the design, development and implementation of data-driven applications across a broader range of health information systems; and the creation of systems that support information exchange between clinical applications. • Emphasizes a more robust mathematical foundation that involves developing interactive health information systems intended to improve clinical workflow and overall quality of individual patient outcomes, as well as the health of entire populations.
Common job titles	<ul style="list-style-type: none"> • Billing coder • Records technician specialist • Insurance claims analyst • Clinical coding specialist • Coding manager • Patient information coordinator • Medical records manager • Patient information coordinator • Privacy officer/manager • Compliance officer • Health information management director 	<ul style="list-style-type: none"> • Clinical analyst • Informatics nurse • Health data analyst • Health care IT project manager • Health informatics consultant • Nursing informatics specialist • Digital transformation consultant • Clinical informatics data scientist • Health care informatics integration engineer • Health informatics director • Director of clinical informatics • Chief information security officer

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Additionally, CCD’s Healthcare Informatics degree is distinguishable from the Health Care Information Systems and Health Care Management offered at MSU Denver, and Healthcare Administration offered at Regis University.

CCD – Health care Informatics	MSUD – Health Care Information Systems	MSUD – Health Care Management	Regis University – Health Care Administration
<p>Major courses</p> <ul style="list-style-type: none"> • Introduction to programming • Database Design and Development • Health Care Systems • Healthcare Communication • Health IT, EHRs, and Information Systems • Coding and Records • Epidemiology and Biostatistics • Programming and Analytics • Law and Ethics in Healthcare • Leadership and Management • Healthcare Research • Healthcare Technology • Project Management • Quality Management 	<p>Major Courses</p> <ul style="list-style-type: none"> • Health Care Organization and Management • Health Care Jurisprudence • Human Resources Management in Health Care • Health Information Systems • Financial Management in Health Care • Strategic Management in Health Care • Electronic Medical Record Applications and Support • Health Information Technology Applications • General Information Systems Theory 	<p>Major Courses</p> <ul style="list-style-type: none"> • Global Health Systems • Health Care Management Foundations, Professionalism, and Applications • Health Care Organization and Management • Health Care Jurisprudence • Human Resources Management in Health Care • Health Care Research Methods • Health Information Systems • Health Disparities in the U.S. • Management in Long-Term Care • Financial Management in Health Care • Health Care Economics • Strategic Management in Health Care 	<p>Major Courses</p> <ul style="list-style-type: none"> • Health Care Systems • Health Care Policy • Health Law Foundations • Quality Assessment and Safety • Organizational Leadership • Health Care Project Management • Healthcare Statistics and Research • Reimbursement • Overview of Informatics and Information Systems

- 5. The degree program could not be provided through a statewide transfer agreement pursuant to Section 23-1-108 (7) with an accredited state four-year institution in the community college's geographic service area or with an accredited state four-year institution of higher education that has a statewide service area, as defined by the Commission pursuant to Section 23-1-109 (2), that will deliver an existing Bachelor of Applied Science program in the community college's service area sooner than the degree program could be offered by the community college.**

Supporting data

The proposed degree program could not be provided through a state transfer agreement due to the lack of an accredited public four-year institution in the state of Colorado that offers a program with the same learning outcomes.

- 6. The proposed program addresses the needs of the community.**

Supporting data

Employers in this field, as indicated in the attached Interact report, realize that a college degree in this profession create a new paradigm for the well-rounded Health Informatics professionals.

In the spring and summer of 2020, CCD conducted an extensive research and gap analysis in the field of Health Informatics. Results from the studies showed gaps in skills needed to fulfill employer needs. Approximately 20 employers and field experts were surveyed on suggested topic areas and skills prior to a focus group meeting. During the Spring and summer of 2020, CCD held three focus groups of about 20 industry experts was held to discuss survey results. The discussion also included details regarding skills, knowledge and competencies needed for entry-level and promotion within the field. Career opportunities, economic growth and the state of the industry were also explored. Below are some example of employers' comments about the program whether it has the right mixture that meets industry needs:

1. Yes; because we are constantly asked for data for ROI and proof of concept.
2. Yes; for overall success
3. Yes; great breadth of coursework will be valuable
4. Yes; It seems like it. I appreciate that legal and ethical issues are covered, that is a huge deal at UCHealth. It seems like the courses offer a good mix of soft and hard skills.
5. Yes; seems to cover a broad spectrum of relevant and necessary topics
6. Yes; sounds complete
7. Yes; sounds on topic
8. Yes; well rounded
9. Yes; we could use this type of educated person will be very helpful for growth of our industry
10. Yes; we need people who can be between the clinical end users and technical programming staff

Furthermore, CCD hired Interact Communications, a third party consultant group, to conduct an environmental scan and program feasibility study. Results from the study provided invaluable information in regard to the perceived need and value of the program, skills needed for promotion in the field, curriculum delivery format, and overall viability of the program.

RECOMMENDATION:

Staff recommends that the Board approve the CCD BAS Degree in Health Informatics and forward the program request to the Colorado Commission on Higher Education for their consideration.

TOPIC: APPROVAL OF BACHELOR OF APPLIED SCIENCE DEGREE IN CANNABIS SCIENCE AND OPERATIONS AT COMMUNITY COLLEGE OF DENVER

PREPARED BY: DR. CHRIS RASMUSSEN, SENIOR DIRECTOR OF ACADEMIC PATHWAYS AND INNOVATION

I. SUMMARY

This consent item recommends approval for the Community College of Denver (CCD) to offer a Bachelor of Applied Science (BAS) degree in Cannabis Science and Operations.

II. BACKGROUND

Colorado Community College System institutions, as well as Aims Community College, received state authorization to propose Bachelor of Applied Science degrees through Senate Bill 14-004, which allows the State Board for Community Colleges and Occupational Education (SBCCOE) and the board of Trustees for Aims Community College to seek approval from the Commission for technical, career, and workforce development Bachelor of Applied Science degree programs and specifies the criteria to be used in evaluating said requests. Among other criteria, the boards must demonstrate workforce and student demand for the degree program and cost-effectiveness to the student and to the system.

Additionally, House Bill 19-1311, in creating the Institute of Cannabis Research (ICR) at CSU-Pueblo, outlined requirements for institutions of higher education that seek to develop cannabis-related degrees or certificates. The bill amended §23-31.5-112, C.R.S., adding subsection (3)(d), which reads, “the [ICR] governing board shall advise any Colorado institution of higher education that seeks to develop a cannabis-specific curriculum. The Colorado commission on higher education shall seek input from the governing board before approving any cannabis-related degrees or certification.”

Community colleges are required to submit proposals for new BAS degree programs to the Department, which are then reviewed by staff relative to the statutory requirements listed elsewhere in this agenda item under “Statutory Authority” (pursuant to C.R.S. §23-1-133. Commission directive - Bachelor of Applied Science degree programs – community colleges – approval). As part of its due diligence, the staff engages the Academic Council as key stakeholders and subject matter experts on matters of academic policy and programs. (The Academic Council is an advisory body and not a decision-making one.) If the proposed degree program meets statutory requirements, it is recommended for approval by the Commission. If the proposed degree program does not meet statutory requirements, staff advises the institution to revise the program and proposal accordingly.

In response to HB19-1311, the Commission revised its policy on Creation Modification or Discontinuance of Academic and Vocational Programs at Public Institutions of Higher Education ([Section I, Part V](#)) to outline required steps for institutions to seek advisement from the ICR governing board on any cannabis-related curriculum and to seek approval from the Commission of all cannabis-related degrees and certifications.

Since applied degrees are usually aligned with a specific profession, are based on demonstrated in-demand workforce needs, and feature more applied learning outcomes, their general education component is usually contextualized within the career. As a result, many but not all BAS degrees have received waivers from the Commission allowing the sponsoring institution to create an academic program that does not include the full GT Pathways curriculum. CCD has not requested a GT Pathways waiver for the proposed BAS degree program in Cannabis Science and Operations.

III. STAFF ANALYSIS

[Commission Policy Section I, Part V](#) lists the statutory criteria to be addressed by an institution proposing a Bachelor of Applied Science degree program. Response to these criteria are included in the attached document CCD submitted to SBCCOE on October 23, 2020 (Attachment A). SBCCOE approved the proposed degree program at its November 11, 2020 meeting. Pending approval from the Higher Learning Commission, the new degree is scheduled to be offered in the Fall 2021 academic term.

Commission policy stipulates that institutions seeking to develop cannabis-related degrees and certifications shall submit a proposal to the Department addressing the following criteria:

- Fit with the institution's statutory role and mission
- Confirmation of required approvals from the institution's governing board and applicable accrediting agencies (or evidence that approval processes have been initiated); and
- Written confirmation of consultation with the Institute of Cannabis Research.

CCD has complied with these requirements. Confirmation of consultation with the Institute of Cannabis Research is included as Attachment B.

Department staff opened a public comment period on the proposed program on November 5, 2020, and closed the public comment period on December 7, 2020. The proposed program was placed on the Academic Council agenda on December 8, 2020, with representatives of CCD available to answer questions. Only one comment was received expressing concern as to whether the program contained sufficient coursework in the sciences to merit the name "Cannabis Science and Operations." The commentor, from CSU-Pueblo, also expressed concern about potential confusion in the marketplace between the CSU-P Bachelor of Science program in Cannabis Biology and Chemistry, and the CCD Bachelor of Applied Science program in Cannabis Science and Operations.

In response, representatives of CCD indicated that the curriculum for the program includes 63-70 credits in biology, chemistry, and physics (depending on chosen concentration or track), which provides sufficient grounding in the natural and physical sciences to prepare graduates for scientific and technical roles in the cannabis industry. CCD representatives also noted that "Science" is already in the degree name ("Bachelor of Applied Science"), and that inclusion of "Operations" in the program name signals preparation for roles in the industry that combine foundational knowledge in the sciences with technical and applied skills that are part and parcel of applied programs. Department staff respects the concerns expressed by CSU-Pueblo but believe that a program name change is not needed to further distinguish the proposed program from the Bachelor of Science program at CSU-Pueblo.

Department staff have determined that CCD has met the required statutory criteria and sees no reason for the Commission to withhold approval of the proposed program.

IV. STAFF RECOMMENDATIONS

Staff recommends that the Commission approve the Bachelor of Applied Science degree in Cannabis Science and Operations at the Community College of Denver.

V. STATUTORY AUTHORITY

C.R.S. §23-1-133

Commission directive - Bachelor of Applied Science degree programs - community colleges – approval

(1) (a) The state board for community colleges and occupational education, referred to in this section as the "state board", shall submit to the commission for its approval technical, career, and workforce development Bachelor of Applied Science degree programs to be offered at one or more community colleges within the state system. The commission shall consider the following criteria in determining whether to approve a bachelor of applied science degree program:

(I) Whether the state board provides data demonstrating workforce and student demand for the degree program;

(II) The regional and professional accreditation requirements for the degree program, if applicable, and whether the college can satisfy those requirements, as appropriate, at both the institutional and program levels;

(III) Whether the state board can demonstrate that providing the degree program within the community college system is cost-effective for the student and the community college system;

(IV) Whether the state board can demonstrate that the degree program is sufficiently distinguishable from:

(A) An existing degree program at a state four-year institution of higher education that is provided to a student who resides in the community college's geographic service area, as defined by the commission pursuant to section 23-1-109 (2), without the student having to change his or her residence; or

(B) A degree program that has been successfully offered previously in conjunction with a state four-year institution of higher education, which degree program will be reinstated sooner than the degree program could be offered by the community college; and

(V) Whether the bachelor of applied science degree program could be provided through a statewide transfer agreement pursuant to section 23-1-108 (7) with an accredited state four-year institution in the community college's geographic service area or with an accredited state four-year institution of higher education that has a statewide service area, as defined by the commission pursuant to section 23-1-109 (2), that will deliver an existing bachelor of applied science program

in the community college's geographic service area sooner than the degree program could be offered by the community college.

(b) In addition, in determining whether to approve a Bachelor of Applied Science degree program, the commission:

(I) Shall consider whether the state board has met the criteria set forth in subparagraphs (I) to (IV) of paragraph (a) of this subsection (1) and whether the proposed bachelor of applied science degree program is in the best interests of the state of Colorado;

(II) Shall consult with the state board and state four-year institutions of higher education concerning whether the collaboration described in subparagraph (V) of paragraph (a) of this subsection (1) is feasible; and

(III) May consult with any state four-year institution of higher education that shares the same geographic service area, as defined by the commission pursuant to section 23-1-109 (2), concerning the proposed degree program to inform the commission of any anticipated system-wide effects of the new degree program.

VI. ATTACHMENTS

Attachment A: CCD Submission to SBCCOE for BAS in Cannabis Science and Operations

Attachment B: Memo from the Institute of Cannabis Research Regarding Cannabis-Related Programs at Community College of Denver

Community College of Denver
Bachelor of Applied Science in Cannabis Science and Operations
10/23/2020

TOPIC: Bachelor of Applied Science in Cannabis Science and Operations

PRESENTED BY: Everette Freeman, Ed.D., President – Community College of Denver

Landon Pirius, Ph.D., Vice Chancellor Academic & Student Affairs, Student
Affairs

RELATIONSHIP TO THE STRATEGIC PLAN:

- Transform the student experience
- Create education without barriers through transformational partnerships
- Redefine our value proposition through accessibility, affordability, quality, accountability, resource development, and operational excellence

EXPLANATION:

Pursuant to CCCS's role and mission (§23-60-201, C.R.S.), CCCS may offer technical, career, and workforce development Bachelor of Applied Science (BAS) degree programs. Authority for the Colorado Community College System to offer BAS degrees was made possible by SB14-004 (Community College Four-year Programs), which was signed by the Governor on February 27, 2014.

§23-60-201, C.R.S., states, in part:

Each community college may offer two-year degree programs with or without academic designation, AND, UPON APPROVAL OF THE BOARD PURSUANT TO SECTION 23-60-211, MAY OFFER TECHNICAL, CAREER, AND WORKFORCE DEVELOPMENT BACHELOR OF APPLIED SCIENCE DEGREE PROGRAMS. No college shall impose admission requirements upon any student. The objects of the community and technical colleges shall be to provide educational programs to fill the occupational needs of youth and adults in career and technical fields, two-year transfer educational programs to qualify students for admission to the junior year at other colleges and universities, basic skills, workforce development, and a broad range of personal and career education for adults, AND TECHNICAL, CAREER, AND WORKFORCE DEVELOPMENT BACHELOR OF APPLIED SCIENCE DEGREE PROGRAMS ESTABLISHED PURSUANT TO SECTION 23-60-211, THAT ADDRESS THE NEEDS OF THE COMMUNITY WITHIN EACH COMMUNITY COLLEGE SERVICE AREA.

This proposal seeks Board approval for a BAS degree in Cannabis Science and Operations for the Community College of Denver (CCD). The legislative criteria for approval of a BAS degree are set

forth below, with a summary of the supporting data demonstrating that the criteria have been met. Additional information is provided in the appendices.

1. Data demonstrate workforce and student demand for the degree program.

Thirty-four states have legalized the medicinal use of cannabis, eleven of which have legalized adult, recreational use. As of 2019 Cannabis Jobs Count, legal cannabis has created 211,000 full-time jobs in America, 64,000 of which were added in 2018. This represents a 110% growth in cannabis jobs in just three years. Colorado Amendment 64 passed in 2012 led to the legalization of cannabis use in Colorado in January 2014. Since 2014, Colorado has continued to add thousands of cannabis jobs. In Colorado, cannabis jobs grew 17% from January 2018 to January 2019. The 17% reflects 4,595 jobs added in 2018 going from a total of 26,891 jobs in 2018 to 31, 486 jobs in 2019. These are high-quality positions with openings at all levels of experience. While these numbers are impressive, Bruce Barcott, deputy editor of Leafy, points out that actual job creation is undercounted for the cannabis industry. According to ZipRecruiter’s job posting data, Denver is one of the top cities nationwide with the most cannabis job openings. Glassdoor’s database revealed over 900 current cannabis job openings in Colorado.

In the fall of 2019, CCD conducted extensive research to determine workforce demand for its proposed AAS Cannabis Business and BAS Cannabis Science and Operations degree programs. Results from the study showed an educational gap in Colorado and a growing need for cannabis education. In addition to the research study, CCD, in collaboration with National Cannabis Industry Association (NCIA), conducted employer surveys (Appendix A) to gauge their interest in the proposed degrees and determine the competencies and skills needed to create highly valued degrees. One hundred percent of the 52 employers who completed the survey indicated their support for the development of the degree programs as they respond to the workforce shortage of qualified professionals in the field of cannabis science and operations. Overwhelmingly, all employers that participated in the survey and the focus groups highly supported the degree programs and many of them indicated their commitment to offering employment to graduates from those degrees, participating in curriculum development and teaching opportunities, participating in the programs’ Advisory Committee, offering internship sites, offering financial support in the form of scholarships, and/or donating equipment (a list of employers and their commitment is in Appendix B). The survey identified the necessary competencies and skills to be included in the curriculum. Focus groups conducted by CCD in the spring and summer of 2020 (Appendix C) validated the research findings and further clarified the skills and competencies needed in this emerging area.

Additionally, CCD hired Interact Communications to conduct an environmental scan for the proposed Bachelor of Applied Science in Cannabis Science and Operations program. The overall average score of all elements of the environmental scan was 5.33, on a 1-7 scale (median 4). This ranks between “slightly positive” (5) and “positive” (6) on our rating system. The full interact report can be found in Appendix D. Below are some highlights from the Interact report:

- The situation for jobs in cannabis related fields in general in Colorado (and other states where laws have made the products more legal) appears to be very strong now, and extremely promising for future growth. This trend of rapidly growing employment numbers and salaries in Colorado is only outpaced by states like California, Washington, and a few others that have a much greater base of population to draw from. Salaries are often higher in these more populous states, though this may be driven by higher costs of living in those states.
- Community College of Denver is poised to be competitive for prospective students in this program. CCD has high graduation rates for its current health-related programs, which have similar prerequisites in sciences related to cannabis science. Also, only one competitor in Colorado officially offers bachelor's-level programs related to this program (Colorado State University - Pueblo), though this program is just beginning in the fall of 2020. The other competitors in Colorado appear to have either smaller certificates or single courses, or they are concerned with master's- or doctorate-level training specialized for medical professionals.
- Even though many of the higher-paying jobs related to cannabis science require a broader base of knowledge than this program provides (such as those that require a master's or a doctorate degree), the data on these jobs indicate that there is an expanding need for people with this type of training in many different industries. If Community College of Denver decides to implement a BAS degree in Cannabis Science program, it could become not only a supplier of candidates to fill local positions, but also a destination school. Students from around the state and the rest of the country may be attracted to this program for both in-person or online specialty job training that they may be prohibited from taking where they live.
- This data and the growing trends for employment in cannabis-related jobs suggest that the program is likely to be successful, though CCD may need to be prepared to devote resources toward attracting people to this program wherever they are (for either in-person or online instruction) in addition to relying on traditional recruitment of local students to grow the program.

In addition to the environmental scan and labor market analysis, Interact Communications conducted in depth phone interviews with potential employers (Appendix D). Fifteen employers from a variety of locations in Colorado (and most were located in the Denver metropolitan area) were interviewed. Interview results indicated that graduates from the Cannabis Science and Operations program are and will be in demand by relevant businesses and industries in the Denver Metro area, the rest of Colorado, and elsewhere. Almost all respondents estimated the need for new employees with BAS degrees in cannabis science to be growing, and many estimated the need to be high. 93.3% of respondents indicated that they employ positions related to cannabis sciences and 53% are currently hiring employees with cannabis science training. Most of these businesses currently employ people with bachelor's-degree level training, this is a preferred level of education for new employees. Most of the respondents believe that a potential new hire with the completed coursework proposed in the BAS Cannabis Science program may be more likely to be able to start at a higher level of employment or move up more quickly in their industry than those without the training. 93.3% of interviewees denoted that the program has the right mix of knowledge and skills

to make its graduates employable at cannabis businesses and 80% indicated that they are willing to send their new employees for professional development and training for Cannabis Science at the Community College of Denver. 100% of respondents revealed that the additional time spent by their employees to take classes in cannabis science is worthwhile and 80% were willing to pay the tuition for their employees to take classes in cannabis science.

To assess student demand for the degree, CCD collected surveys from current students and recent graduates. Out of the 271 students completed the survey, 94 students were interested in pursuing a Bachelor of Applied Science (BAS) degree in Cannabis Science and Operations (CSO). An additional 39 students were interested in both Cannabis Science and Operations BAS and Health Informatics BAS (another proposed BAS degree). 67% of the 94 students indicated that the cost for completing the BAS degree is worth the investment to gain a career advancement in the field while 31% had no opinion. Full report can be found in Appendix E.

2. The regional and professional accreditation requirements for the degree program, if applicable, have been met.

Regional accreditation. This program will require approval by the Higher Learning Commission (HLC). CCD has drafted and will submit the HLC *BAS Degree Request for Degree Approval and Substantive Change Application* upon receiving all appropriate System and State approvals of the program. Additionally, the cannabis-related curricula was reviewed by the Institute of Cannabis Research (ICR) in accordance with Commission on Higher Education Policy Section I, Part V. Results of the ICR review and our response to their recommendations can be found in Appendix F.

3. Providing the degree program within the Community College System is cost-effective for the students and the Community College System.

Supporting data. CCD's Bachelor of Applied Science (BAS) degree in Cannabis Science and Operations (CSO) offers a cost-effective degree completion option. The existing associate degree feeder programs serve as the first two years of the BAS program. Upon admission to the program, students will need only 60 credit hours including general education and cannabis-specific courses to meet the Colorado Department of Higher Education's requirement of 120 credit hours for a baccalaureate degree. The degree completion approach is a cost-effective way for students to obtain a bachelor's degree offering access to advanced career opportunities. The table below illustrates how CCD's tuition and fees for the BAS in Cannabis Science and Operations compare to published tuition and fees rates at other institutions that offer similar bachelor's degrees. **Note - comparative program costs in the chart below reflect 2020-2021 rates and do not include room and board required by some four-year institutions.*

Institution	Program	Resident Tuition and Fees, 120 credits	Non-Resident Tuition and Fees, 120 credits
CCD	BAS Cannabis Science and Operations	\$31,757	\$82,381
CSU Pueblo	BS Cannabis Biology and Chemistry	\$44,039	\$75,818
CU Denver	BS Chemistry	\$45,548	\$127,988
Northern Michigan University	BS Medicinal Plant Chemistry	\$60,397	\$88,507
Lake Superior State University	BS Cannabis Chemistry	\$43,952	\$43,952

CCD prepared a cost-benefit analysis for the degree (See p. 7). CCD projects that the BAS CSO will break even within three years without any negative effects on operations of other academic programs.

Program budget assumptions. CCD expects 30 students for the first year using conservative estimates based on student surveys and Interact feasibility study.

Revenue projections are based on the 300- and 400-level cannabis-related courses only and do not include income or expenses associated with offering general education electives or any of the courses associated with the first 60 credits in the associate degrees that this program build on. Tuition will be charged at a rate consistent with other BAS programs with a high requirement for specialized equipment and high cost course fees will be assessed.

Enrollment

Thirty part-time students (a conservative estimate; there is a lot of interest in this degree based on student surveys as shown in appendix C.) will be enrolled in the first year. We do allow for 5% annual attrition in our projections. Based on these assumptions, 30 students will be enrolled in the first year. In the second year, 59 students will be enrolled (29 continuing students + 30 new incoming students). Using the same assumptions as above, 87 students will be enrolled in the third year. In year four, it is projected that 28 students will graduate and 30 new students will enroll, inclusive of 5% attrition, for a total of 87 students. Using the same rationale, the total number of students in year five and beyond will be approximately 87.

Personnel

CCD will hire a full-time program Director beginning July 1st, 2021. The director will provide oversight of the instructional and enrollment management operations. In the first year, the Director will teach all courses, totaling seven credits. After that, the Director will teach 15 to 20 credit hours each year. Adjunct instructors with specific expertise in subject matter areas will provide the majority of direct instruction. We will monitor for any additional faculty needs as enrollment increases. Additionally, CCD will hire a lab coordinator to assist with the day-to-day laboratory operations.

Director, adjunct, and lab coordinator salaries and benefits are projected to increase 2.5% based on the regional consumer price index (CPI).

Instructional Operating Expenses

Equipment, material, and supplies that are integral to the success of the degree are represented in the Operating line item in the budget. Additional items under Operating include marketing, a feasibility study conducted by a Interact Communications, professional development, curriculum development, and official functions including advisory board meetings. The conservative fiscal analysis for the program includes \$400,000 of equipment purchased over a two-year period. However, CCD has received strong interest from a variety of equipment manufacturer and industry partners to donate funds and equipment for the program further strengthening the fiscal outlook for this program.

Future Capital Expenses

While the program will start instruction in existing space in the Science building on the Auraria campus, the college has identified a location in the Boulder Creek building for this program, which will provide strong integration into its Boulder Creek Center of Excellence for Health and Wellness education and collaboration with other health and wellness programs. The college anticipates requesting State Board approval to expend up to \$1.7M of its reserves to significantly remodel this space into a Center for Chemical and Biological Analysis primarily benefitting this program, as well as undergraduate research in other chemistry and biology areas.

In addition, the CCD Foundation has prepared a strong capital campaign for the program, both for equipment needs and for the Boulder Creek space remodel.

Non-Instructional Operating Expenses

All other services integral to the success of students are represented in the Non-Instructional Operating Expenses line item in the budget. These include academic success coaching, retention coordination, academic advising, career placement, library services, tutoring, technical services and support, equipment depreciation, physical space operations, and fiscal and human resources services necessary for supporting students, faculty, and staff.

Full Program Cost-Benefit Analysis

On the following page is a cost benefit analysis for the full program. Even without donations of funds or equipment, the program begins to make an annual profit in Year 3, Fiscal Year 2023-24 and has paid back the investment the college will make in the program by Year 5, Fiscal Year 2025-26. This analysis does not include the investment the college will make of its reserves to remodel space in the Boulder Creek building. Absent any donations, that investment could take just over 10 years to recover. However, given the likelihood of donated funds from the CCD Foundation capital campaign, that investment will likely be recovered on a shorter timetable.

Community College of Denver							
Cannabis Science and Operations							
Bachelor of Applied Science Degree							
COST / BENEFIT ANALYSIS							
		Fiscal Year					
		Prep Year	Year 1	Year 2	Year 3	Year 4	Year 5
REVENUES:		2020-21	2021-2022	2022-2023	2023-2024	2024-2025	2025-2026
Tuition - Resident			217,661	412,636	584,316	601,846	621,320
State Funding (COF)			27,600	52,324	74,100	76,318	78,785
Total Tuition			245,261	464,960	658,417	678,164	700,105
Registration Fee			1,324	2,669	4,033	4,134	4,238
High Cost Course Fees			1,604	5,276	9,226	9,457	9,693
Total Other Revenue			2,927	7,944	13,260	13,591	13,931
TOTAL REVENUE			248,188	472,904	671,676	691,755	714,036
EXPENSES:							
Salaries/Benefits:							
Administrative - Salaries							
Program Director		0	70,000	71,750	73,544	75,382	77,267
Administrative - Benefits		0	25,900	26,548	27,211	27,891	28,589
Lab Coordinator		0	45,500	46,638	47,803	48,999	50,223
Lab Coordinator Benefits		0	16,835	17,256	17,687	18,129	18,583
Adjunct - Salary		0	0	6,266	29,055	29,781	30,525
Adjunct - Benefits		0	0	1,404	6,508	6,671	6,838
Faculty Curriculum Development		10,212	10,467	1,589	1,629	1,670	1,712
Subtotal Salary/Benefits		10,212	168,702	171,450	203,438	208,523	213,737
Operating Expenses:							
Instructional Supplies/Resources		0	200,000	200,000	10,000	10,000	10,000
Consultant - Course Designer		0	0	0	0	0	0
Program Marketing			5,000	5,000	5,000	5,000	5,000
Contract Expense - Interact Feasibility Study		15,000	0	0	0	0	0
Prof. Development & Travel			5,000	5,000	5,000	5,000	5,000
Official Functions - Advisory Boards		1,000	500	500	500	500	500
Non-Instructional Operating Expenses			127,873	233,507	322,461	322,461	322,461
Subtotal Program Operating Expenses		16,000	338,373	444,007	342,961	342,961	342,961
TOTAL EXPENSES		26,212	507,075	615,456	546,399	551,485	556,698
YEARLY PROFIT (LOSS)		(26,212)	(258,887)	(142,553)	125,277	140,270	157,338
FTE			23	42	58	58	58
CUMULATIVE PROFIT (LOSS)		(26,212)	(285,099)	(427,651)	(302,374)	(162,104)	(4,767)
CUMULATIVE PROFIT (LOSS) Excluding Prep Year			(258,887)	(401,440)	(276,162)	(135,892)	21,445

4. The degree program is sufficiently distinguishable from: a) an existing degree program at a state four-year institution of higher education that is provided to a student who resides in the community college's geographic service area, as defined by the Commission pursuant to Section 23-1-109 (2), without the student having to change his or her residence, or b) a degree program that has been successfully offered previously in conjunction with a state four-year institution of higher education, which degree program will be reinstated sooner than the degree program could be offered by the community college.

Supporting data.

The program's external feasibility study (Appendix D) assessed existing state and regional programs to determine if there were competitors. There is only one confirmed competitor within the state offering a bachelor's degree. CSU Pueblo offers a bachelor's degree in Cannabis Biology and Chemistry. Distance to competitor is not a considerable factor for this program. Due to the hands-on scientific nature of the program and the face-to-face delivery format, a 75-mile or greater drive would not likely pull local residents to the competing program. Additionally, the degree programs at CCD and CSU Pueblo are sufficiently distinguishable. The Cannabis Biology and Chemistry degree is heavy on science for the required courses with only a limited number of cannabis applied courses. This creates a barrier for students with Associate of Applied Science degrees in Career and Technical areas. This will require them to take many additional science courses required for the CSU's degree graduating with significantly more than 120 credits thus wasting both students' time and money. Additionally, CSU's Cannabis Biology and Chemistry degree lacks applied courses recommended by employers. In comparison, CCD's Cannabis Science and Operations degree is a more applied degree designed in collaboration with our industry partners. Topics offered in this degree align with industry standards and meet industry needs.

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CSU's degree in Cannabis Biology and Chemistry

B.S. Cannabis Biology and Chemistry Major

Natural Products Track

*Designates new courses

Core Courses (46 credits)

BIOL 181/181L – College Biology I/Lab (4 credits)
BIOL 182/182L – College Biology II/Lab (4 credits)
BIOL 201/201L – Botany/Lab (4 credits)
BIOL 465 – Environmental Toxicology (3 credits)
CHEM 121/L – General Chemistry I/Lab (5 credits)
CHEM 122/L – General Chemistry II/Lab (5 credits)
CHEM 301/L – Organic Chemistry I/Lab (5 credits)
CHEM 302/L – Organic Chemistry II/Lab (5 credits)
CHEM 311 – Intro to Biochemistry (3 credits)
CBC 413/L* -- Cannabis Physiology and Growth (4 credits)
CBC 463* – Medicinal Chemistry and Pharmacology (3 credits)
CBC 493* – Seminar (1 credit)

Other Required Courses (11 credits)

BIOL 171 – First Year Seminar (1 credit)
BIOL 350 -- Mendelian and Pop Genetics (2 credits)
BIOL 351 – Molecular Biology and Genetics (2 credits)
BIOL 422 – Neurobiology (3 credits)
CBC 401* -- Medicinal Plant Biochemistry (3 credits)

Advisor Approved Electives (9-11 credits) At least 6 upper division credits

Support Courses (10-13 credits)

MATH 126 – Calculus and Analytical Geometry I (5 credits) or
MATH 221 – Applied Calculus: An Intuitive Approach (4 credits)
PHYS 201 – Principles of Physics I (3 credits) or PHYS 221 – General Physics I (4 credits)
PHYS 202 – Principles of Physics II (3 credits) or PHYS 222 – General Physics II (4 credits)

General Education Courses (24 credits)

ENG 101 – English Composition I (3 credits)
ENG 102 – English Composition II (3 credits)
History -- 1 course (3 credits)
Humanities – 3 courses (9 credits)
Social Sciences – 2 courses (6 credits)

General Electives (15-19 credits) Students are encouraged to take other courses relevant to the subject such as PS223 Criminal Law or SOC 203 Criminal Justice System

Total Credit Hours - 120 credits

Analytical Track

*Designates new courses

Core Courses (46 credits)

BIOL 181/181L – College Biology I/Lab (4 credits)
BIOL 182/182L – College Biology II/Lab (4 credits)
BIOL 201/201L – Botany/Lab (4 credits)
BIOL 465 – Environmental Toxicology (3 credits)
CHEM 121/L – General Chemistry I/Lab (5 credits)
CHEM 122/L – General Chemistry II/Lab (5 credits)
CHEM 301/L – Organic Chemistry I/Lab (5 credits)
CHEM 302/L – Organic Chemistry II/Lab (5 credits)
CHEM 311 – Intro to Biochemistry (3 credits)
CBC 413/L* -- Cannabis Physiology and Growth (4 credits)
CBC 463* – Medicinal Chemistry and Pharmacology (3 credits)
CBC 493* – Seminar (1 credit)

Other Required Courses (18 credits)

CHEM 170/370 – Academic Orientation/Enrichment (1 credit)
CHEM 317/L – Quantitative Analysis/Lab (5 credits)
CHEM 322 – Physical Chemistry II (3 credits)
CHEM 419/L – Instrumental Analysis/Lab (5 credits)
CBC 422/L* -- Natural Products Extraction and Analysis/Lab (4 credits)

Advisor Approved Electives (5-7 credits)

Support Courses (16-18 credits)

MATH 126 – Calculus and Analytical Geometry I (5 credits)
MATH 224 – Calculus and Analytical Geometry II (5 credits)
PHYS 201 – Principles of Physics I (3 credits) or PHYS 221 – General Physics I (4 credits)
PHYS 202 – Principles of Physics II (3 credits) or PHYS 222 – General Physics II (4 credits)

General Education Courses (24 credits)

ENG 101 – English Composition I (3 credits)
ENG 102 – English Composition II (3 credits)
History -- 1 course (3 credits)
Humanities – 3 courses (9 credits)
Social Sciences – 2 courses (6 credits)

General Electives (7-11 credits) Students are encouraged to take other courses relevant to the subject such as PS223 Criminal Law or SOC 203 Criminal Justice System

Total Credit Hours - 120 Credits

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Bachelor of Applied Science in Cannabis Science (Upper 60 credits)

General Education (20 credits)

- [Introduction to statistics \(MAT 135\)](#) , (3 credits)
- [Basic Anatomy and Physiology \(BIO 106\)](#) (4 credits) or Human Anatomy and Physiology I with Lab (BIO 201) (4 credits credits) or Biology: Human Approach (BIO 104)
- Technical Writing (ENG 131) or English Composition I or ENG (ENG 121) or English Composition II (ENG 122) or English composition III (ENG 201) (3 CR)
- [General College Chemistry I \(CHE 111\)](#) (5 credits)
- [General College chemistry II \(CHE 112\)](#) (5 credits)

Required courses (37credits)

Cannabis Seminar (3 credits)

Fundamentals of Cannabis Science (5 credits)

Extraction for Production (3 credits)

Endocannabinoid System and Pharmacology (4 credits)

Public health and Cannabis Use (3 credits)

Cannabinoid Plant Botany and Cultivation (4 credits)

Chemical Analysis of Medical Plant (4 credits)

Microbiological analysis Medical Plant Products 2 (4 Credits)

Analysis of Medical Plant Products Capstone (5 credits)

Cooperative Education/Internship (2 credits)

Electives (3 credits)

Select one course from the below list

Environmental Sustainability and Waste Management in Cannabis Cultivation (3 credits)

Manufactured-Infused Products (3 credits)

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Other institutions in Colorado which offer cannabis-related topics but are not competitors include

- **University of Colorado - Aurora, Skaggs School of Pharmacy and Pharmaceutical Sciences:** 8-week online Continuing Education program, Graduate Certificate, and Master's degree in Pharmaceutical Sciences (Cannabis Science and Medicine Specialty Track). Programs started in August 2020; unknown number of students

- **University of Colorado - Boulder, Cannabis Entrepreneurship Academy:** According to a press release, the University of Colorado at Boulder is offering a new course focused on cannabis science through the Continuing Education program at the university; the 4-day training is scheduled during June 2021; unknown number of students

- **University of Denver:** Daniels College of Business offers two elective courses in the Business of Marijuana and in Cannabis Journalism. Sturm College of Law offers a Marijuana Pathway to complement its existing Juris Doctor degree program. In 2015, Denver-based national cannabis law firm Vicente Sederberg endowed a professorship of marijuana law and policy; unknown number of law school students.

Other cannabis training businesses, institutes, schools, and “universities” in Colorado are not institutions of higher learning. Entities offering mainly online unaccredited training programs with an unknown number of participants being served include:

- **Inspyre:** Classes geared toward accountants, engineers, human-resource professionals, government regulators, and legislators who work with new cannabis laws, programs, and businesses as legalization spreads; no information on this company was available, and their website is not currently functioning; unknown number of students.

- **Clover Leaf University - Denver:** with workshops offered in ten states, including Colorado, it claims to be geared toward industry members or those trying to enter the field; Clover Leaf's classes claim to be accredited by the Colorado Department of Higher Education's Private Occupational School Board and offer training for executive leadership, attorneys, growers, extractors, and other roles in the trade; unknown number of students.

- **Cannabis Training University - Denver:** has online courses and videos devoted to basic growing techniques, cooking infusions, laws and regulations, how to open a dispensary, and others; offers Master of Cannabis Certification; unknown number of students

- **Hemp Temps University - Aurora:** Hemp Temps University claims to be the only educational institution in Colorado that offers education and employment in one; HTU has an education platform that ties directly into Hemp Temps, a full service staffing agency specific to the Hemp industry; unknown number of students

- **Colorado Cannabis School - Parshall:** offers in-person and some online courses that are not accredited; unknown number of students

In conclusion, there no existing degree program at a state four-year institution of higher education that is provided to students who reside in the CCD's geographic service area.

- 5. The degree program could not be provided through a statewide transfer agreement pursuant to Section 23-1-108 (7) with an accredited state four-year institution in the community college's geographic service area or with an accredited state four-year institution of higher education that has a statewide service area, as defined by the Commission pursuant to Section 23-1-109 (2), that will deliver an existing Bachelor of Applied Science program in the community college's service area sooner than the degree program could be offered by the community college.**

Supporting data

The proposed degree program could not be provided through a statewide transfer agreement. Due to the lack of an accredited state four-year institution in CCD's geographic service area which offers a related degree at the bachelor's level, CCD is unable to create a transfer articulation at this time. Additionally, the Cannabis Biology and Chemistry bachelor's degree offered by CSU Pueblo is science heavy as discussed above and is not comparable to the CCD's proposed degree. Students with AAS CTE degrees will be required to complete a large number of general education science courses ending up with significantly more than a 120 credits for a bachelor's degree. The seamless transfer from CCD to CSU Pueblo is not possible as evidenced in the degrees' descriptions above.

- 6. The proposed program addresses the needs of the community.**

Supporting data

The increasing legitimacy and legality of medicinal plants nationwide and in Colorado has created a great demand for qualified technical personnel. Several business journals and articles, and conversations with many Colorado cannabis industry representatives and representatives from the National Cannabis Industry Association (NCIA), indicated that educational institutions are not meeting industry demands.

This proposed degree responds to a national, regional, and local workforce shortage of qualified professionals in the field of cannabis.

RECOMMENDATION:

Staff recommends that the Board approve the CCD BAS Degree in Cannabis Science and Operations and forward the program request to the Colorado Commission on Higher Education for their consideration.



Chris Rasmussen, PhD
1600 Broadway, Suite 2200
Denver, CO 80202

September 17, 2020

Dear Dr. Rasmussen,

The proposed Bachelor of Applied Science (BAS) degree in Cannabis Science and Operations and Associate of Applied Science (AAS) degree in Cannabis Business submitted by the Community College of Denver (CCD) has been reviewed by the Institute of Cannabis Research (ICR) Governing Board per the Board's adopted process as required by House Bill 19-1311. This was a multistep process that includes a review by a Board Subcommittee, which is shared with the entire Governing Board for further comment. Finally, the Board approved by vote the input and feedback that appears in this letter, which has been shared with the proposing institution.

Feedback:

- The Board is impressed with the list of potential future employers and partners identified in Appendix A of the proposal. CCD is to be complimented for engaging a broad range of partners in the process of developing their proposed programs.
- CCD should consider additional electives for the BAS program. Perhaps consider partnering with another school that has a cannabis program to offer access to a range of program relevant elective options.
- CCD should consider including the Cannabis Cultivation Environmental Sustainability and Waste Management as a required course in both programs.
- As part of the Fundamentals of Cannabis Science course, will students be working with cannabis samples in the lab? If so, CCD should make sure that appropriate measures are taken to ensure federal funding is not compromised. To do so working with broad spectrum products that do not contain THC and working with industrial hemp should address this.
- It does not appear that the supplied syllabi are complete. Details typically found on syllabi are missing, such as required text(s) and prerequisites are not included. This is concerning as it relates to prerequisites given the fact that adequate discussion of cannabinoid chemistry, the endocannabinoid system, pharmacology, and even topics in analytical chemistry would presumably require some basic organic chemistry and/or biochemistry training. Based on a review of the course information for General



Chemistry (CHE 111 and 112) it does not appear that students are gaining exposure to organic chemistry or biochemistry topics. CCD should add fundamental organic chemistry and biochemistry into the curriculum. Many institutions have a yearlong sequence of a general, organic, and biochemistry as an alternative to a traditional general chemistry sequence. CCD may consider a similar approach to address this deficiency.

- It appears that many of the topics include in the Fundamentals of Cannabis Science course are not specific to cannabis. Suggest revisiting the topics to address this and ensure that they course has a cannabis science focus. Alternatively, the list of topics may reflect that fact that students are not getting foundational analytical chemistry or microbiology education prior to cannabis specific content, and therefore, these topics are being included into a cannabis science course. It may be more appropriate to ensure that students have foundational knowledge in analytical chemistry and microbiology prior to application to cannabis science. Could consider a condensed analytical chemistry course that includes basics of quantitative analysis, error analysis and propagation, benchtop techniques, and an introduction into some instrumental techniques with an emphasis on chromatography and spectroscopy.
- With respect to the discussion of the entourage effect, adverse drug reactions, and side effects of medicinal cannabis as part of the Endocannabinoid System and Pharmacology, the instructor should ensure that considerations as to the risks of different ages, disease states and especially danger of drug to drug interaction.
- The Analysis of Medicinal Plant Products series of courses should include liquid chromatography (HPLC, LC/MS, and LC/MS/MS), and alternative elemental analysis techniques (i.e. ICP-OES, flame adsorption/emission, and graphite furnace techniques) prior to the Analysis of Medicinal Plant Products Capstone. This way instructors can hit on advanced topics in these areas along with the proposed advanced topics in GC and GC/MS as part of the capstone course.
- If it is not already so, we encourage that an experience with a potential employer, such as those in Appendix A, as part of the Cooperative Education/Internship
- Through the AAS program, perhaps as part of the Cannabis Business Accounting course in particular, students should understand the challenges of running a successful profitable enterprise – a growth farm, a retail store, etc. Maybe it is already in the Learning outcomes, but it is not obvious to us.
- CCD should ensure adequate quality control topics/techniques as well as third party testing are incorporated into the Analysis of Medical Plant Products series. It is important that students



understand available and accepted techniques and approaches measuring quality. There are identical topics described on the Analysis of Medical Plant Products 1 and 2 syllabi, which should be addressed.

- It appears to be an oversight that a program with Operations in the title does not have an introductory operations course in the curriculum. It is recommended that CCD include an introductory operations course to the curriculum for each program, which should include topics such as product flow, inventory tracking, GMP, SOP development, etc.

Please let me know if I can provide any additional details about the discussion or suggestions.
Thank you for your time.

Sincerely,

L. Cinnamon Bidwell, Ph.D.
Chair, ICR Governing Board
Director, Center for Research and Education Addressing Cannabis and Health
University of Colorado Boulder

TOPIC: APPROVAL OF ASSOCIATE OF APPLIED SCIENCE DEGREE IN CANNABIS BUSINESS AT COMMUNITY COLLEGE OF DENVER

PREPARED BY: DR. CHRIS RASMUSSEN, SENIOR DIRECTOR OF ACADEMIC PATHWAYS AND INNOVATION

I. SUMMARY

This consent item recommends approval for the Community College of Denver (CCD) to offer a Associate of Applied Science (AAS) degree in Cannabis Business.

II. BACKGROUND

House Bill 19-1311, in creating the Institute of Cannabis Research (ICR) at CSU-Pueblo, outlined requirements for institutions of higher education that seek to develop cannabis-related degrees or certificates. The bill amended §23-31.5-112, C.R.S., adding subsection (3)(d), which reads, “the [ICR] governing board shall advise any Colorado institution of higher education that seeks to develop a cannabis-specific curriculum. The Colorado commission on higher education shall seek input from the governing board before approving any cannabis-related degrees or certification.”

In response to HB19-1311, the Commission revised its policy on Creation Modification or Discontinuance of Academic and Vocational Programs at Public Institutions of Higher Education ([Section I, Part V](#)) to outline required steps for institutions to seek advisement from the ICR governing board on any cannabis-related curriculum and to seek approval from the Commission of all cannabis-related degrees and certifications. As part of its due diligence, the staff engages the Academic Council as key stakeholders and subject matter experts on matters of academic policy and programs. (The Academic Council is an advisory body and not a decision-making one.) If the proposed degree program meets statutory requirements and complies with Commission policies, it is recommended for approval by the Commission. If the proposed degree program does not meet statutory requirements or comply with Commission policies, staff advises the institution to revise the program and proposal accordingly.

III. STAFF ANALYSIS

[Commission Policy Section I, Part V](#) stipulates that institutions seeking to develop cannabis-related degrees and certifications shall submit a proposal to the Department addressing the following criteria:

1. Fit with the institution’s statutory role and mission
2. Confirmation of required approvals from the institution’s governing board and applicable accrediting agencies (or evidence that approval processes have been initiated); and
3. Written confirmation of consultation with the Institute of Cannabis Research.

CCD has complied with requirements (1) and (2) per the information provided in Attachment A. Confirmation of consultation with the Institute of Cannabis Research is included as Attachment B.

Department staff opened a public comment period on the proposed program on November 5, 2020, and closed the public comment period on December 7, 2020. The proposed program was placed on the Academic Council agenda on December 8, 2020, with representatives of CCD available to answer questions. No comments were received that indicated concern with the proposed program.

Department staff have determined that CCD has met the required statutory criteria and has complied with Commission policy, and sees no reason for the Commission to withhold approval.

IV. STAFF RECOMMENDATIONS

Staff recommends that the Commission approve the Associate of Applied Science degree in Cannabis Business at the Community College of Denver.

V. STATUTORY AUTHORITY

C.R.S. §23-31.5-112

Institute of cannabis research – governing board – powers relating to the receipt and use of certain tax revenues – definitions.

...

(2)(a) There is created the institute of cannabis research, to be housed at Colorado state university - Pueblo, unless a relocation occurs pursuant to subsection (7) of this section.

...

(3)(d) The governing board shall advise any Colorado institution of higher education that seeks to develop a cannabis-specific curriculum. The Colorado commission on higher education shall seek input from the governing board before approving any cannabis-related degrees or certification.

VI. ATTACHMENTS

Attachment A: CCD Submission to SBCCOE for AAS in Cannabis Business

Attachment B: Memo from the Institute of Cannabis Research Regarding Cannabis-Related Programs at Community College of Denver

Associate of Applied Science Degree in Cannabis Business

Thirty-four states have legalized the medicinal use of cannabis, eleven of which have legalized adult, recreational use. As of 2019 Cannabis Jobs Count, legal cannabis has created 211,000 full-time jobs in America, 64,000 of which were added in 2018. This represents a 110% growth in cannabis jobs in just three years. Colorado Amendment 64 passed in 2012 led to the legalization of cannabis use in Colorado in January 2014. Since 2014, Colorado has continued to add thousands of cannabis jobs. In Colorado, cannabis jobs grew 17% from January 2018 to January 2019. The 17% reflects 4,595 jobs added in 2018 going from a total of 26,891 jobs in 2018 to 31,486 jobs in 2019. These are high-quality positions with openings at all levels of experience. While these numbers are impressive, Bruce Barcott, deputy editor of Leafy, points out that actual job creation is undercounted for the cannabis industry. According to ZipRecruiter's job posting data, Denver is one of the top cities nationwide with the most cannabis job openings. Glassdoor's database revealed over 900 current cannabis job openings in Colorado.

Increasing legitimacy and legality of medicinal plants nationwide and in Colorado has created great demand for qualified technical personnel. A number of business journals and articles and conversations with a number of Colorado cannabis industry representatives and representatives from the National Cannabis Industry Association (NCIA) indicated that educational institutions are not meeting industry demands.

Our goal at Community College of Denver is to address this local and regional workforce shortage by developing cannabis pathways and produce qualified professionals to work in this field. Our proposed cannabis program is designed to prepare students for success in the emerging cannabis industries. For the past year, Community College of Denver has been working closely with Cannabis Industry representative and NCIA to identify the skills and competencies needed in the field.

The conversations led to two pathways: A cannabis business pathway and cannabis science and Operations pathway. The cannabis business degree focuses on the business, laws and regulation sides of cannabis industry including logistics, distribution, retail, and sales.

The Associate of Applied Science in Cannabis Business degree is designed to prepare a new generation of business managers and operators within a cannabis enterprise. The program combines a mix of core business, management, and marketing curriculum with applied cannabis-related courses. It provides students with the knowledge, skills, and practical experience essential to operate a cannabis business within the legal constraints.

Program Student Learning Outcomes

- Apply concepts of business, accounting, and management to specific cannabis businesses.
- Develop and pitch a business canvas, and a marketing plan for a startup cannabis business.
- Analyze and compare state, federal and international laws and regulations related to growing, distributing, selling, and marketing cannabis products.
- Think critically and analytically about topics related to cannabis legalization, usage, benefits, effects, and social equity.
- Obtain industry-recognized credentials relevant to cannabis business and operations.
- Enhance their employability skills and build a record of work and hands-on experience.

Below is a description of degree courses. Full description of course can be found in Appendix N in the state packet submitted for Cannabis Science and Operations.

PROGRAM NAME : Cannabis Business**PROGRAM CREDIT HOURS: 60-63 PROGRAM CONTACT HOURS: 990-1,035**

Please use this credit to contact hours crosswalk and include your contact hours in your curriculum map. The proposals should reflect the (in Banner) contact hours below. You will need to know banner schedule type to make accurate calculations and currently those are in the catalog or Banner. Simply multiply your course credit hour by the (in Banner) contact hour for your

Instructional Activity	Ratio	Contact Hours per Credit Hour Actual (in Banner)	Banner Schedule Type
Lecture	1:1	12.5 (15)	LEC
Laboratory: Academic/Clinical	2:1	25 (30)	LAB CLI
Lecture + Laboratory: Vocational/Technical (CTE)	1.5:1	18.75 (22.5) This anticipates that lecture and lab are intrinsically intermixed.	LLB
Lecture and Academic or Clinical Laboratory combination	Lecture 1:1 Laboratory 2:1	Dependent on hours dedicated to lecture and hours dedicated to lab.	LEL
Practicum	3:1	37.5 (45)	PRA
Internships	3:1	37.5 (45)	INT
Independent Study	4:1	50 (60)	IND
Studio Music	2.5:1	31.25 (37.5)	SMU
Studio Art	2:1	25 (30)	STU
Private Music	0.5:1	6.25 (7.5)	PRI
Physical Education	2:1	25 (30)	LAB

course type.

PROGRAM NAME : Cannabis Business**PROGRAM CREDIT HOURS: 60-63 PROGRAM CONTACT HOURS: 990-1,035****Copy and Paste this format for your first year required English and Math Courses:**

ENG 131	Technical Writing	3	45	LEC
MAT 135	Intro to Statistics	3	45	LEC

Copy and Paste this format for electives in your programs (change for your choices):

Choices(Pick 8-9 credits)	Program Related Courses			
MAN 105	Logistics Management	3	45	LEC
BUS 201	Business Logistics Optimization	3	45	LEC
BUS 202	Purchasing, Supply, and Sourcing Logistics	3	45	LEC
BIO 106	Basic Anatomy and Physiology	4	60	LEC
CSO 405	Endocannabinoid System and Pharmacology	4	60	LEC
CSO 325	Cannabinoid Plant Botany and Cultivation	4	75	LEL
One History Course (GT-HI1)	History			
HIS 101	Western Civilization: Antiquity-1650: GT-HI1	3	45	LEC
HIS 111	The World: Antiquity – 1500: GT-HI1	3	45	LEC
HIS 112	The World: 1500-Present: GT-HI1	3	45	LEC
HIS 205	Women in the World History – GT-HI1	3	45	LEC

Full-Time Schedule**First Semester: (fall)**

Course Code	Course Name	Credit Hours	Contact Hours	Banner Schedule Type
BUS 115	Introduction to Business	3	45	LEC
CSO 100	Cannabis Fundamentals	3	45	LEC
ENG 131	Technical Writing	3	45	LEC
MAT 135	Intro to Statistics	3	45	LEC
MAR 216 or MAR 155	Principles of Marketing or Social Media for Business	3	45	LEC
Total		15	225	

Second Semester: (spring)

Course Code	Course Name	Credit Hours	Contact Hours	Banner Schedule Type
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PROGRAM NAME : Cannabis Business**PROGRAM CREDIT HOURS:** 60-63 **PROGRAM CONTACT HOURS:** 990-1,035

ECO 201 or ECO 202	Principles of Macroeconomics or Principles of Microeconomics	3	45	LEC
CSO 150	Cannabis Business	3	45	LEC
PHI 205	Business Ethics	3	45	LEC
CSO 200	Cannabis Laws, Regulations, and Compliance	3	45	LEC
CSO 215	Software and Systems Requirements for Cannabis Business	3	45	LEC
Total		15	225	

Third Semester: (fall)

Course Code	Course Name	Credit Hours	Contact Hours	Banner Schedule Type
CSO 220	Cannabis Business Accounting	4	60	LEC
CSO 230	Cannabis Retail and Sales Management	3	45	LEC
	History (GT-HI1)	3	45	LEC
BUS 121	Basic Workplace Skills	1	15	LEC
	Elective (Choose one course)	3-4	45-75	(LEC/LEL)
Total		14-15	210-240	

Fourth Semester: (spring)

Course Code	Course Name	Credit Hours	Contact Hours	Banner Schedule Type
CSO 435	Cannabis-Infused Products	3	45	LEC
CSO 425	Environmental Sustainability and Waste Management in Cannabis Cultivation	3	45	LEC
CSO 450	Physical, Psychological, and Social Effects of Cannabis	3	45	LEC
	Elective (Choose one/two courses)	4-6	60-75	(LEC/LEL)
CSO 280	Internship	3	135	INT
Total		16-18	330-345	

Part-Time Schedule**First Semester: (fall)**

Course Code	Course Name	Credit Hours	Contact Hours	Banner Schedule Type
BUS 115	Introduction to Business	3	45	LEC
CSO 100	Cannabis Fundamentals	3	45	LEC
ENG 131	Technical Writing	3	45	LEC
MAR 216 or MAR 155	Principles of Marketing or Social Media for Business	3	45	LEC

PROGRAM NAME : Cannabis Business**PROGRAM CREDIT HOURS: 60-63 PROGRAM CONTACT HOURS: 990-1,035**

	Total	12	180
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Second Semester: (spring)

Course Code	Course Name	Credit Hours	Contact Hours	Banner Schedule Type
ECO 201 or ECO 202	Principles of Macroeconomics or Principles of Microeconomics	3	45	LEC
MAT 135	Intro to Statistics	3	45	LEC
CSO 150	Cannabis Business	3	45	LEC
CSO 215	Software and Systems Requirements for Cannabis Business	3	45	LEC
	Total	12	180	

Third Semester: (fall)

Course Code	Course Name	Credit Hours	Contact Hours	Banner Schedule Type
PHI 205	Business Ethics	3	45	LEC
CSO 200	Cannabis Laws, Regulations, and Compliance	3	45	LEC
	Elective (Choose one course)	3-4	45-75	(LEC/LEL)
	Total	9-10	135-165	

Fourth Semester: (spring)

Course Code	Course Name	Credit Hours	Contact Hours	Banner Schedule Type
CSO 220	Cannabis Business Accounting	4	60	LEC
CSO 230	Cannabis Retail and Sales Management	3	45	LEC
CSO 425	Environmental Sustainability and Waste Management in Cannabis Cultivation	3	45	LEC
BUS 121	Basic Workplace Skills	1	15	LEC
	Total	11	165	

PROGRAM NAME : Cannabis Business

PROGRAM CREDIT HOURS: 60-63 PROGRAM CONTACT HOURS: 990-1,035

Fifth Semester: (fall)

Course Code	Course Name	Credit Hours	Contact Hours	Banner Schedule Type
	History (GT-HI1)	3	45	LEC
CSO 435	Cannabis-Infused Products	3	45	LEC
	Elective (Choose one/two courses)	4-6	60-75	(LEC/LEL)
	Total	10-12	150-165	

Sixth Semester: (spring)

Course Code	Course Name	Credit Hours	Contact Hours	Banner Schedule Type
CSO 450	Physical, Psychological, and Social Effects of Cannabis	3	45	LEC
CSO 280	Internship	3	135	INT
	Total	6	180	

*This rotation is accurate as of **(Insert month and year here)**. Unforeseen events could impact the offering of a particular course; however, academic units will make every effort to assure the least negative impact on students should a change in a rotation be required.*

Cannabis Business Associate of Applied Science Degree

Five-Year Plan

Assessment Plan

Program: Cannabis Business	Department/Center Cannabis Pathways/Center for Health and Natural Sciences
Contact Person TBD	Contact Email Address TBD

Vision Statement

Be a Center of Excellence for Cannabis Education

Mission Statement

The Cannabis Business AAS degree prepares future generations of business managers and operators to meet the workforce needs of the emerging cannabis field through diverse coursework and practical experience.

Institutional and Program Learning Outcome

CCD's Institutional learning outcomes

- Quantitative Literacy – Interpret, represent, and analyze mathematical information accurately and perform calculations to solve problems.
- Effective Communication – Communicate a central guiding idea to a defined audience, for a concrete purpose, employing effective conventions in the service of meaning.
- Intercultural Literacy – Apply a set of cognitive, affective, and behavioral skills to effectively interact in a variety of cultural contexts.
- Critical Thinking – Analyze information and ideas from multiple perspectives and articulate an argument, opinion, or conclusion based on that analysis.

Program Student Learning Outcomes

- Apply concepts of business, accounting, and management to specific cannabis businesses.
- Develop and pitch a business canvas, and a marketing plan for a startup cannabis business.

- Analyze and compare state, federal and international laws and regulations related to growing, distributing, selling, and marketing cannabis products.
- Think critically and analytically about topics related to cannabis legalization, usage, benefits, effects, and social equity.
- Obtain industry-recognized credentials relevant to cannabis business and operations.
- Enhance their employability skills and build a record of work and hands-on experience.

Student Learning Outcome	Measure Level
	Institutional/Program
SLO 1: Quantitative Literacy – Interpret, represent, and analyze mathematical information accurately and perform calculations to solve problems	Institutional Level
SLO2: Effective Communication Communicate a central guiding idea to a defined audience, for a concrete purpose, employing effective conventions in the service of meaning. Develop and pitch a business canvas, and a marketing plan for a startup cannabis business	Institutional and Program Levels
SLO3: Intercultural Literacy – Apply a set of cognitive, affective, and behavioral skills to effectively interact in a variety of cultural contexts Discuss the legalization of cannabis and its physical, psychological, and social impacts across different demographics	Institutional and Program Levels
SLO 4: Critical Thinking – Analyze information and ideas from multiple perspectives and articulate an argument, opinion, or conclusion based on that analysis Think critically and analytically about topics related to cannabis legalization, usage, benefits, effects, and social equity	Institutional and Program Levels
SLO 5: Obtain industry-recognized credentials relevant to cannabis business and operations	Program Level
SLO 6: Enhance employability skills and build a record of work and hands-on experience	Program Level

SLO 1: Quantitative Literacy – Interpret, represent, and analyze mathematical information accurately and perform calculations to solve problems		
Measure Type	Measure Details	Acceptable Target

<ul style="list-style-type: none"> Exams Assignments 	<ul style="list-style-type: none"> Exams and assignments to be completed in MAT 135 	<ul style="list-style-type: none"> Cohort average of 75% or better in MAT 135 Final Exam
Responsible Personnel: Faculty members or instructors of the courses		
Implementation Plan (Timeline): Assignments and exams are collected throughout the semester when MAT 135 is offered		

<p>SLO2: Effective Communication</p> <p>Communicate a central guiding idea to a defined audience, for a concrete purpose, employing effective conventions in the service of meaning</p> <p>Develop and pitch a business canvas, and a marketing plan for a startup cannabis business</p>		
<p>Measure Type</p> <ul style="list-style-type: none"> Business plan for a startup cannabis business Debate 	<p>Measure Details</p> <ul style="list-style-type: none"> Prepare and defend a business plan for a startup cannabis business. Students will defend a plan in front of panel of industry representatives (CSO 150) Debate topics related to cannabis legalization, usage, benefits, and effects (CSO 200, CSO 450) 	<p>Acceptable Target</p> <ul style="list-style-type: none"> 100% of the students will develop and defend a business plan Cohort average of 80% or higher on the business plan and defense
Responsible Personnel: Faculty members or instructors of the courses and industry representatives		
Implementation Plan (Timeline): During the semester when the course are offered		

<p>SLO3: Intercultural Literacy –</p> <p>Analyze information and ideas from multiple perspectives and articulate an argument, opinion, or conclusion based on that analysis</p> <p>Think critically and analytically about topics related to cannabis legalization, usage, benefits, effects, and social equity</p>		
<p>Measure Type</p> <ul style="list-style-type: none"> Classroom discussions Reflection papers Classroom presentations 	<p>Measure Details</p> <ul style="list-style-type: none"> Students evaluate available evidence, complete case studies, and explore dosing strategies and formulations and debate the safety and efficacy of medical cannabis (CSO 100) Students argue how legalization has changed the public health and safety of Cannabis. (CSO 450) 	<p>Acceptable Target</p> <ul style="list-style-type: none"> Cohort average of 85% or higher on their reflection papers and presentations

	<ul style="list-style-type: none"> Apply statistical data analytics to draw conclusion on the cannabis usage across different demographics (CSO 450) 	
Responsible Personnel: Faculty members or instructors of the courses		
Implementation Plan (Timeline): During the semester when the courses are offered		

<p>SLO 4: Critical Thinking–</p> <p>Analyze information and ideas from multiple perspectives and articulate an argument, opinion, or conclusion based on that analysis</p> <p>Think critically and analytically about topics related to cannabis legalization, usage, benefits, effects, and social equity</p>		
<p>Measure Type</p> <ul style="list-style-type: none"> Classroom discussions Research paper 	<p>Measure Details</p> <ul style="list-style-type: none"> Students evaluate available evidence, complete case studies, and explore dosing strategies and formulations and debate the safety and efficacy of medical cannabis (CSO 450) Students argue how legalization has changed the public health and safety of Cannabis (CSO 450) Students apply statistical data analytics to draw conclusion on the cannabis usage across different demographics (CSO 450) Students compose a research paper on a topic of choice related to changes in cannabis industry and present using tips for effective visual and oral presentation (CSO 100) Students analyze a cannabis business, develop a report outlining strengths, weaknesses, opportunities, and threats (CSO 200) 	<p>Acceptable Target</p> <ul style="list-style-type: none"> Cohort average of 85% or higher on their research papers and reports.
Responsible Personnel: Faculty members or instructors of the courses		

Implementation Plan (Timeline): During the semester when the courses are offered

SLO 5: Obtain industry-recognized credentials relevant to cannabis business and operations		
Measure Type <ul style="list-style-type: none"> Industry Certification 	<ul style="list-style-type: none"> Students will obtain Servsafe – Food safety certification, and the Responsible Vendor Program certification (CSO 435) 	Acceptable Target <ul style="list-style-type: none"> 85% of the cohort will pass the Servsafe – Food safety certification, and the Responsible Vendor Program certification form the first time.
Responsible Personnel: Faculty members or instructors of the courses		
Implementation Plan (Timeline): During the semester when the courses are offered		

SLO 6: Enhance employability skills and build a record of work and hands-on experience		
Measure Type <ul style="list-style-type: none"> Internship Employer surveys Student surveys 	Measure Details <ul style="list-style-type: none"> Students will complete 135 hours of internship to build a record of work and hands-on experience. (CSO 280) We will collect employer surveys at the end of the internship and also one semester after students are employed. Employer satisfaction will be graded on a scale of 1 to 5 with 5 being most satisfied and 1 not satisfied Information on students placements will be collected at the end of the program 	Acceptable Target <ul style="list-style-type: none"> 100% of students complete 135 hours of internship Employer satisfaction will be 4 or better 85% of students are employed in the field within 6 months after graduation
Responsible Personnel: Program Director		
Implementation Plan (Timeline): Employer surveys will be collected after the internship and after students are employed with the employer. Students surveys will be collected after the students graduate from the program		

In addition to assessing the student learning outcomes, we will conduct an annual program review for the program. Data points included in the annual program review include:

- Enrollment/FTE
- Success rates
- Cost per FTE

Program Demographics

Program SWOT analysis

Program alignment with industry standards and workforce needs will be continuously assessed through discussions with industry partners and program advisory board members.

Analysis of Need

Thirty-four states have legalized the medicinal use of cannabis, eleven of which have legalized adult, recreational use. As of 2019 Cannabis Jobs Count, legal cannabis has created 211,000 full-time jobs in America, 64,000 of which were added in 2018. This represents a 110% growth in cannabis jobs in just three years. Colorado Amendment 64 passed in 2012 led to the legalization of cannabis use in Colorado in January 2014. Since 2014, Colorado has continued to add thousands of cannabis jobs. In Colorado, cannabis jobs grew 17% from January 2018 to January 2019. The 17% reflects 4,595 jobs added in 2018 going from a total of 26,891 jobs in 2018 to 31,486 jobs in 2019. These are high-quality positions with openings at all levels of experience. While these numbers are impressive, Bruce Barcott, deputy editor of Leafy, points out that actual job creation is undercounted for the cannabis industry. According to ZipRecruiter's job posting data, Denver is one of the top cities nationwide with the most cannabis job openings. Glassdoor's database revealed over 900 current cannabis job openings in Colorado.

In the fall of 2019, CCD conducted extensive research to determine workforce demand for its proposed AAS Cannabis Business and BAS Cannabis Science and Operations degree programs. Results from the study showed an educational gap in Colorado and a growing need for cannabis education. In addition to the research study, CCD, in collaboration with National Cannabis Industry Association (NCIA), conducted employers surveys to gauge their interest in the proposed degrees and determine the competencies and skills needed to create highly valued degrees. One hundred percent of the 52 employers who completed the survey, indicated their support for the development of the degree programs as they respond to the workforce shortage of qualified professionals in the field of cannabis science and operations. Overwhelmingly, all employers that participated in the survey and the focus groups highly supported the degree programs and many of them indicated their commitment to offering employment to graduates from those degrees, participating in curriculum development and teaching opportunities, participating in the programs' Advisory Committee, offering internship sites, offering financial support in the form of scholarships, and/or donating equipment. The survey identified the necessary competencies and skills to be included in the curriculum. Focus groups conducted by CCD in the spring and summer of 2020 validated the research findings and further clarified the skills and competencies needed in this emerging area.

Additionally, CCD hired Interact Communications to conduct an environmental scan for the proposed Bachelor of Applied Science in Cannabis Science and Operations program. The overall average score of all elements of the environmental scan was 5.33, on a 1-7 scale (median 4). This ranks between “slightly positive” (5) and “positive” (6) on our rating system. Below are some highlights from the Interact report:

- The situation for jobs in cannabis related fields in general in Colorado (and other states where laws have made the products more legal) appears to be very strong now, and extremely promising for future growth. This trend of rapidly growing employment numbers and salaries in Colorado is only outpaced by states like California, Washington, and a few others that have a much greater base of population to draw from. Salaries are often higher in these more populous states, though this may be driven by higher costs of living in those states.
- Community College of Denver is poised to be competitive for prospective students in this program. CCD has high graduation rates for its current health-related programs, which have similar prerequisites in sciences related to cannabis science. Also, only one competitor in Colorado officially offers bachelor’s-level programs related to this program (Colorado State University - Pueblo), though this program is just beginning in the fall of 2020. The other competitors in Colorado appear to have either smaller certificates or single courses, or they are concerned with master’s- or doctorate-level training specialized for medical professionals.
- Even though many of the higher-paying jobs related to cannabis science require a broader base of knowledge than this program provides (such as those that require a master’s or a doctorate degree), the data on these jobs indicate that there is an expanding need for people with this type of training in many different industries. If Community College of Denver decides to implement a BAS degree in Cannabis Science program, it could become not only a supplier of candidates to fill local positions, but also a destination school. Students from around the state and the rest of the country may be attracted to this program for both in-person or online specialty job training that they may be prohibited from taking where they live.
- This data and the growing trends for employment in cannabis-related jobs suggest that the program is likely to be successful, though CCD may need to be prepared to devote resources toward attracting people to this program wherever they are (for either in-person or online instruction) in addition to relying on traditional recruitment of local students to grow the program.

To assess student demand for the degree, CCD collected surveys from current students and recent graduates. Out of the 271 students completed the survey, 94 students were interested in pursuing a Bachelor of Applied Science (BAS) degree in Cannabis Science and Operations (CSO). An additional 39 students were interested in both Cannabis Science and Operations BAS and Health Informatics BAS (another proposed BAS degree). 67% of the 94 students indicated

that the cost for completing the BAS degree is worth the investment to gain a career advancement in the field while 31% had no opinion.

Enrollment Strategies

Enrollments in this program will consist of students with an associate degree. Student demographics in the program be similar to CCD's student population. CCD serves a wide array of students. Among the student population, more than 60 percent are first generation, 33.9 percent are Hispanic, 11.1 percent are African Americans, and 31.2 percent are white. Over 80 percent of student population qualify for financial aid. In addition to traditional college students seeking a degree or a certificate, CCD serves adults who are or have been in the workforce and are looking for retraining or a career change. The program will also serve military personnel, part-time and full-time students.

Thirty part-time students (a conservative estimate; there is a lot of interest in this degree based on students surveys as shown in appendix C.) will be enrolled in the first year. We do allow for 5% annual attrition in our projections.. Based on these assumptions, 30 students will be enrolled in the first year. In the second year, 59 students will be enrolled (29 continuing students + 30 new incoming students). Using the same assumptions as above, 87 students will be enrolled in the third year. In year four, it is projected that 28 students will graduate and 30 new students will enroll, inclusive of 5% attrition, for a total of 87 students. Using the same rationale, the total number of students in year five and beyond will be approximately 87.



Chris Rasmussen, PhD
1600 Broadway, Suite 2200
Denver, CO 80202

September 17, 2020

Dear Dr. Rasmussen,

The proposed Bachelor of Applied Science (BAS) degree in Cannabis Science and Operations and Associate of Applied Science (AAS) degree in Cannabis Business submitted by the Community College of Denver (CCD) has been reviewed by the Institute of Cannabis Research (ICR) Governing Board per the Board's adopted process as required by House Bill 19-1311. This was a multistep process that includes a review by a Board Subcommittee, which is shared with the entire Governing Board for further comment. Finally, the Board approved by vote the input and feedback that appears in this letter, which has been shared with the proposing institution.

Feedback:

- The Board is impressed with the list of potential future employers and partners identified in Appendix A of the proposal. CCD is to be complimented for engaging a broad range of partners in the process of developing their proposed programs.
- CCD should consider additional electives for the BAS program. Perhaps consider partnering with another school that has a cannabis program to offer access to a range of program relevant elective options.
- CCD should consider including the Cannabis Cultivation Environmental Sustainability and Waste Management as a required course in both programs.
- As part of the Fundamentals of Cannabis Science course, will students be working with cannabis samples in the lab? If so, CCD should make sure that appropriate measures are taken to ensure federal funding is not compromised. To do so working with broad spectrum products that do not contain THC and working with industrial hemp should address this.
- It does not appear that the supplied syllabi are complete. Details typically found on syllabi are missing, such as required text(s) and prerequisites are not included. This is concerning as it relates to prerequisites given the fact that adequate discussion of cannabinoid chemistry, the endocannabinoid system, pharmacology, and even topics in analytical chemistry would presumably require some basic organic chemistry and/or biochemistry training. Based on a review of the course information for General



Chemistry (CHE 111 and 112) it does not appear that students are gaining exposure to organic chemistry or biochemistry topics. CCD should add fundamental organic chemistry and biochemistry into the curriculum. Many institutions have a yearlong sequence of a general, organic, and biochemistry as an alternative to a traditional general chemistry sequence. CCD may consider a similar approach to address this deficiency.

- It appears that many of the topics include in the Fundamentals of Cannabis Science course are not specific to cannabis. Suggest revisiting the topics to address this and ensure that they course has a cannabis science focus. Alternatively, the list of topics may reflect that fact that students are not getting foundational analytical chemistry or microbiology education prior to cannabis specific content, and therefore, these topics are being included into a cannabis science course. It may be more appropriate to ensure that students have foundational knowledge in analytical chemistry and microbiology prior to application to cannabis science. Could consider a condensed analytical chemistry course that includes basics of quantitative analysis, error analysis and propagation, benchtop techniques, and an introduction into some instrumental techniques with an emphasis on chromatography and spectroscopy.
- With respect to the discussion of the entourage effect, adverse drug reactions, and side effects of medicinal cannabis as part of the Endocannabinoid System and Pharmacology, the instructor should ensure that considerations as to the risks of different ages, disease states and especially danger of drug to drug interaction.
- The Analysis of Medicinal Plant Products series of courses should include liquid chromatography (HPLC, LC/MS, and LC/MS/MS), and alternative elemental analysis techniques (i.e. ICP-OES, flame adsorption/emission, and graphite furnace techniques) prior to the Analysis of Medicinal Plant Products Capstone. This way instructors can hit on advanced topics in these areas along with the proposed advanced topics in GC and GC/MS as part of the capstone course.
- If it is not already so, we encourage that an experience with a potential employer, such as those in Appendix A, as part of the Cooperative Education/Internship
- Through the AAS program, perhaps as part of the Cannabis Business Accounting course in particular, students should understand the challenges of running a successful profitable enterprise – a growth farm, a retail store, etc. Maybe it is already in the Learning outcomes, but it is not obvious to us.
- CCD should ensure adequate quality control topics/techniques as well as third party testing are incorporated into the Analysis of Medical Plant Products series. It is important that students



understand available and accepted techniques and approaches measuring quality. There are identical topics described on the Analysis of Medical Plant Products 1 and 2 syllabi, which should be addressed.

- It appears to be an oversight that a program with Operations in the title does not have an introductory operations course in the curriculum. It is recommended that CCD include an introductory operations course to the curriculum for each program, which should include topics such as product flow, inventory tracking, GMP, SOP development, etc.

Please let me know if I can provide any additional details about the discussion or suggestions.
Thank you for your time.

Sincerely,

L. Cinnamon Bidwell, Ph.D.
Chair, ICR Governing Board
Director, Center for Research and Education Addressing Cannabis and Health
University of Colorado Boulder

TOPIC: APPROVAL OF COMMISSION STANDARDS AND PROCEDURES FOR IMPLEMENTATION OF HOUSE BILL 19-1206 (DEVELOPMENTAL EDUCATION AND SUPPLEMENTAL ACADEMIC INSTRUCTION)

PREPARED BY: DR. CHRIS RASMUSSEN, SENIOR DIRECTOR OF ACADEMIC PATHWAYS AND INNOVATION

I. SUMMARY

This consent item presents recommended Commission standards and procedures associated with House Bill 19-1206 (Concerning Removing Equity Gaps in Higher Education by Ensuring More Students Have Access to Supplemental Academic Instruction). The bill identifies three areas that require additional standards and procedures—approved by the Commission and managed by Department staff—that are not addressed in the Commission’s [Developmental Education](#) policy: 1) institutions must submit plans to comply with statutory provisions and deadlines by August 1, 2021; 2) institutions may request—and the Commission may grant—extensions to statutory deadlines upon demonstration of exceptional circumstances; and 3) institutions may request—and the Commission may grant—waivers of Commission policies and procedures to engage in pilot projects.

II. BACKGROUND

On April 25, Governor Polis signed into law [HB 19-1206](#) (Higher Education Supplemental Academic Instruction). The act amended various parts of state statute, most prominently CRS §23-1-113 and CRS §23-1-113.3, concerning the delivery of basic skills/developmental education courses by state-supported institutions of higher education in Colorado. The act is designed to move institutions away from the use of pre-requisite remedial education courses and toward supplemental academic instruction (SAI) or other forms of co-requisite remediation (credit-bearing courses or other supports offered in conjunction with a gateway, college-level course). The act directs the Commission to adopt a developmental education policy that requires public institutions of higher education to maximize the likelihood of student success in gateway courses in math and English.

The key provisions of the act applicable to this Commission business item are as follows:

- For institutions authorized to offer developmental education, the act requires that, beginning in the 2022-23 academic year, no more than 10 percent of enrolling students shall be placed into pre-requisite developmental education courses (CRS §23-1-113.3(1)(a)(I)). This includes all community, junior, and local district colleges; Adams State and Colorado Mesa Universities; and Western Colorado University in Gunnison and Chaffee Counties.
- For institutions authorized to offer developmental education, the act requires that, by August 1, 2021, institutions shall have a plan in place to meet this requirement; the act also allows for institutions to request a two-year extension for full implementation (CRS §23-1-113.3(1)(a)(II)).

- The act allows institutions to pilot new approaches to developmental education for students who may not benefit from SAI or other forms of co-requisite remediation, and to seek waivers from the commission to expand or duplicate successful pilot projects (CRS §23-1-113.3(1)(a)(III)).
- The act allows institutions to request an extension from the Commission of up to two years to comply with the ten percent threshold upon demonstrating “exceptional circumstances.”

The Department engaged in extensive stakeholder consultation to inform the policy revision process, including creation of a cross-functional workgroup on implementation of HB19-1206. The workgroup was composed of faculty in English and in math, and developmental education experts.

III. STAFF ANALYSIS

Department staff drafted documents that provide direction to institutions on the structure and content of their compliance plans and to formalize institutional requests for an extension of relevant statutory deadlines. We believe the Commission’s Innovation Policy, and the criteria and [application process](#) developed for that policy, is sufficient for requests for waivers to implement pilot projects in developmental education. While the Commission pre-approved a one-year extension of statutory deadlines through a resolution approved at its December 2020 meeting, a formal request process is still required, as is a process for requesting an extension of up to two years, which is allowed for in statute. These proposed standards and procedures were presented to Academic Council at its meeting of January 12, 2021. They were also vetted with the Commission’s Standing Committee on Academic Affairs & Student Success. The Standing Committee emphasized the imperative to move forward with deliberate speed and minimize implementation delays in the interest of promoting student success and addressing equity gaps, which is the centerpiece of the legislative declaration to HB19-1206.

The proposed “HB19-1206 Implementation Plan Template” is included as Attachment A. The proposed “HB19-1206 Implementation Deadline Extension Request” is included as Attachment B. The application for waivers from Commission policy are available online at <http://masterplan.highered.colorado.gov/cche-innovation-in-policy/>.

IV. STAFF RECOMMENDATIONS

Staff recommends Commission approval of the proposed standards and procedures associated with House Bill 19-1206 regarding 1) the structure and content of institutional plans to comply with relevant statutory deadlines; 2) requests for extensions to relevant statutory deadlines; and 3) requests for waivers from Commission policies to engage in pilot projects in developmental education.

V. STATUTORY AUTHORITY

C.R.S. §23-1-113

Commission directive – admission standards for baccalaureate and graduate institutions of higher education – policy – report – definitions.

...

(1.5) (a) (I) The commission shall establish and the governing boards shall implement a policy pursuant to section 23-1-113.3 to identify matriculated students who need additional supports to be successful in gateway courses in English and mathematics and standards and procedures whereby state institutions of higher education may offer supplemental academic instruction or developmental education courses as provided in section 23-1-113.3. The commission's policy must prohibit the placement of a student in developmental education courses based on a single instrument or test and must be designed to maximize the likelihood that a student will complete gateway courses in English and mathematics within one year. In addition, the commission's policy must require state institutions to use an evidence-based placement approach to placing students into English as a second language courses, and placement of these students must be designed to maximize the likelihood that a student placed in English as a second language courses will complete gateway courses in English within three years. The commission, in consultation with the governing boards, shall ensure that the policy aligns with the admission policy adopted pursuant to subsection (1) of this section. In identifying the standards for developmental education, the commission may differentiate requirements for mathematics based on the prerequisite skills needed for required courses within a student's declared program of study.

...

C.R.S. §23-1-133.3

Commission directive – developmental education courses – report.

(I) (a) (I) As part of the policy adopted by the commission pursuant to section 23-1-113 (1.5)(a), the commission shall adopt and the governing boards shall implement standards and procedures whereby state institutions of higher education may offer developmental education courses, as defined in section 23-1-113 (11)(b), pursuant to this section, as prerequisites to a gateway course in English and mathematics, as defined in section 23-1-113 (11)(b.5). Beginning in the 2022-23 academic year, no more than ten percent of students enrolling in a state institution of higher education shall be enrolled directly into a developmental education course, as defined in section 23-1-113 (11)(b), that is prerequisite to a gateway course in English or mathematics if the developmental education course lengthens the student's time to degree beyond the time it would take the student to complete the degree if the student had enrolled directly into a gateway course.

(II) On or before August 1, 2021, each state institution of higher education authorized pursuant to subsection (2)(a) of this section to offer developmental education courses, as defined in section 23-1-113 (11)(b), shall have a plan in place to meet the requirements described in subsection (1)(a)(I) of this section. The commission's standards and procedures must allow an institution of higher education to request an extension from the commission of up to two years to meet the requirements described in subsection (1)(a)(I) of this section, upon demonstrating exceptional circumstances.

(III) The commission's standards and procedures adopted pursuant to subsection (1)(a)(I) of this section must allow state institutions of higher education serving groups of students who are not successful in supplemental academic instruction to pilot different approaches that are more successful for those students and to request a waiver from the commission's standards and procedures in order to duplicate or expand successful approaches.

(2) (a) Subject to the provisions of this section, Adams state university, Colorado Mesa university, Western Colorado university in Chaffee and Gunnison counties, any local community college, and any community college governed by the state board for community colleges and occupational education may offer developmental education courses, as defined in section 23-1-113 (11)(b), and receive stipend payments from the state on behalf of eligible undergraduate students, as defined in section 23-18-102 (5).

...

VI. ATTACHMENTS

Attachment A: HB19-1206 Implementation Plan Template

Attachment B: HB19-1206 Implementation Deadline Extension Request



HB19-1206 Implementation Plan Template

HB19-1206 requires institutions of higher education authorized to offer developmental education courses to submit to the Department, no later than August 1, 2021, a plan to meet the requirement of §23-1-113.3(1)(a)(I), that “beginning in the 2022-23 academic year, no more than ten percent of students enrolling in a state institution of higher education shall be enrolled directly into a developmental education course...that is prerequisite to a gateway course in English or mathematics if the developmental education course lengthens the student's time to degree beyond the time it would take the student to complete the degree if the student had enrolled directly into a gateway course.” Statute authorizes the Commission on Higher Education to grant extensions to the implementation date of up to two years.

Ten percent of students enrolling in a state institution of higher education will be defined using IPEDS Outcomes Measures cohorts for all entering degree/certificate-seeking undergraduate students in a given academic year (July 1 to June 30), including full-time, part-time, first-time, and non-first-time (transfer in) students. See <https://nces.ed.gov/ipeds/use-the-data/survey-components/11/outcome-measures>.

This template is for institutions to articulate their plans for meeting the above statutory requirement starting the 2022-23 academic year. If the institution has requested and been granted an extension of one year or two years, the plan should articulate how the institution will meet the statutory requirement starting in the 2023-24 or 2024-25 academic year, respectively. The plan should be submitted by the chief academic officer or designee. Systems of institutions may submit one plan while identifying approaches and strategies unique to each system institution, where appropriate.

Implementation plans must be submitted to the Department by **August 1, 2021**.

Please complete all sections of this form.

Institution	Click or tap here to enter text.
Name of Submitter	Click or tap here to enter text.
Title of Submitter	Click or tap here to enter text.
Date of Submission	Click or tap to enter a date.
<i>Provide an overview of the institution’s implementation plan. Overview should include, but is not limited to administrative, policy, programmatic, and data/research strategies.</i>	
Click or tap here to enter text.	
<i>Describe how the institution will utilize assessment and placement strategies to meet the requirements of §23-1-113.3(1)(a)(I).</i>	



Click or tap here to enter text.	
<i>Describe how the institution will utilize academic advising and coaching strategies to meet the requirements of §23-1-113.3(1)(a)(I).</i>	
Click or tap here to enter text.	
<i>Describe how the institution will utilize curricular (credit-bearing) strategies—including co-requisite remediation—to meet the requirements of §23-1-113.3(1)(a)(I).</i>	
Click or tap here to enter text.	
<i>Describe how the institution will utilize co-curricular (non-credit-bearing) and other student support strategies to meet the requirements of §23-1-113.3(1)(a)(I).</i>	
Click or tap here to enter text.	
<i>Describe how the institution will utilize data and analytics strategies to meet the requirements of §23-1-113.3(1)(a)(I).</i>	
Click or tap here to enter text.	
<i>Describe how the institution will use policy and personnel strategies to meet the requirements of §23-1-113.3(1)(a)(I).</i>	
Click or tap here to enter text.	
<i>Please provide a detailed timeline of the implementation plan.</i>	
Click or tap here to enter text.	
Name and Signature of Chief Academic Officer or Designee	
Click or tap here to enter name.	Signature

DRAFT





HB19-1206 Implementation Deadline Extension Request

HB19-1206 requires institutions of higher education authorized to offer developmental education courses to submit to the Department, no later than August 1, 2021, a plan to meet the requirement of §23-1-113.3(1)(a)(I), that “beginning in the 2022-23 academic year, no more than ten percent of students enrolling in a state institution of higher education shall be enrolled directly into a developmental education course...that is prerequisite to a gateway course in English or mathematics if the developmental education course lengthens the student's time to degree beyond the time it would take the student to complete the degree if the student had enrolled directly into a gateway course.” Statute authorizes the Commission on Higher Education to grant extensions to the implementation date of up to two years due to “exceptional circumstances.”

The Commission has pre-approved any request for an extension of one year, per a resolution passed at its December 3, 2020 meeting, due to the impact of the CoVID-19 pandemic. Institutions requesting a one-year extension should check the appropriate box below. Institutions requesting a two-year extension should check the appropriate box and provide the requested information. Institutions may initially request a one-year extension and request a second one-year extension at a later date.

One-year extension requests must be submitted to the Department by **January 1, 2022**. Granting of an extension does not obviate the requirement for institutions to submit an implementation plan by August 1, 2021. Requests for extensions to the 2024-25 academic year will not be considered prior to January 1, 2023.

Please complete all sections of this form.

Institution	Click or tap here to enter text.	
Name of Submitter	Click or tap here to enter text.	
Title of Submitter	Click or tap here to enter text.	
Date of Submission	Click or tap to enter a date.	
What type of extension is the institution seeking?		
<input type="checkbox"/> One-Year Extension (to the 2023-24 AY)	<input type="checkbox"/> Two-Year Extension (to the 2024-25 AY)	
<i>(For one-year extension requests, no additional information is required. For two-year extension requests, continue with this form).</i>		



<i>Summarize the reasoning for the two-year extension request.</i>	
Click or tap here to enter text.	
<i>Describe the exceptional circumstances that merit a two-year extension of implementation.</i>	
Click or tap here to enter text.	
<i>Describe in detail what has or will be delayed (e.g., funding, policy change, professional development, external approvals) that make implementation prior to 2024 infeasible or impossible.</i>	
Click or tap here to enter text.	
<i>In the legislative declaration for HB19-1206, the General Assembly declared that “(e) There are serious adverse consequences when a student is placed into developmental education courses. These adverse consequences include discouraging some students from pursuing a postsecondary education, as well as burdening other students with higher educational costs and delaying the student's degree plan” and “(f) Many students successfully complete developmental education courses but fail to enroll in and complete their gateway courses, indicating that alternative approaches to developmental education are necessary.”</i>	
<i>Given the concerns expressed by the General Assembly, and the wealth of data that demonstrates the efficacy of co-requisite (SAI) approaches over traditional, pre-requisite remediation, describe how a two-year extension will benefit students.</i>	
Click or tap here to enter text.	
<i>If the extension is granted, what is the institution’s plan for ensuring proper and timely implementation of the policy provisions and requirements?</i>	
Click or tap here to enter text.	
Name and Signature of Chief Academic Officer or Designee	
Click or tap here to enter name.	Signature



TOPIC: RECOMMEND APPROVAL OF REAUTHORIZATION OF EDUCATOR PREPARATION PROGRAMS AT ROCKY MOUNTAIN COLLEGE OF ART AND DESIGN

PREPARED BY: DR. BRITTANY LANE, DIRECTOR OF EDUCATOR PREPARATION

I. SUMMARY

This item recommends reauthorization of the educator preparation unit and educator preparation programs at the Rocky Mountain College of Art and Design.

II. STATUTORY AUTHORITY

§23-1-121 C.R.S.: (4) (a) (I) The department, in conjunction with the department of education, shall review each educator preparation program offered by an institution of higher education as provided in paragraph (b) of this subsection (4) and shall establish a schedule for review of each educator preparation program that ensures each program is reviewed as provided in this section not more frequently than once every five years.

III. BACKGROUND

Pursuant to C.R.S. §23-1-121 the Colorado Commission on Higher Education (CCHE) considers reauthorization of all educator preparation programs at public and private institutions of higher education. The process for reauthorization of educator preparation programs is as follows:

- Colorado Department of Education (CDE) conducts a review of course content to ensure alignment with the requirements for licensure pursuant to C.R.S. §22-2-109
- Colorado Department of Higher Education (CDHE) reviews the unit and its programs for the following statutory performance criteria: admission system; ongoing advising and screening of educator candidates; integration of theory and practice in coursework and field based training; supervised field based experience; and assessment of candidates' subject matter and professional knowledge and ability to apply the professional knowledge base [C.R.S. §23-1-121(2)].
- DHE and CDE then jointly conduct an on-site visit of the unit and its educator preparation programs.
- CDE makes a recommendation to the State Board of Education (SBE), and then forwards the Board's recommendation to the CDHE.
- CDHE incorporates the recommendation alongside staff analysis in the recommendation to CCHE.

IV. STAFF ANALYSIS

At its meeting on January 13, 2021 the Colorado SBE approved the content of the educator preparation programs at the Rocky Mountain College of Art and Design. CDE staff transmitted SBE's approval of the following endorsement programs:

- Art

Department staff took the SBE recommendation into consideration with the materials provided by RMCAD, stakeholder feedback, and the site visit conducted September 21st - 22nd 2020. For more information, the final reauthorization report is attached.

V. STAFF RECOMMENDATION

Staff recommends Commission reauthorization of the educator preparation unit and educator preparation program at the Rocky Mountain College of Art.



COLORADO

**Department of
Higher Education**



COLORADO

Department of Education

**REPORT BY THE REAUTHORIZATION SITE VISIT
TEAM: Rocky Mountain College of Art + Design**

REPORT SUBMITTED TO ROCKY MOUNTAIN COLLEGE OF ART AND DESIGN
DECEMBER 1, 2020

Part I. Introduction

This report summarizes the findings of the state reauthorization team for Rocky Mountain College of Art and Design (RMCAD) art education program by the Colorado Department of Higher Education (CDHE) and the Colorado Department of Education (CDE).

A. Introduction and Background

The art educator preparation program at (RMCAD) was reviewed for reauthorization in fall of 2020 with a virtual visit conducted September 21st and 22nd, 2020.

The previous reauthorization of the art education endorsement program at RMCAD took place on April 23rd, 2015. The State Board of Education (SBE) and the Colorado Commissioners of Higher Education (CCHE) initially approved RMCAD to serve as an educator preparation provider for the art education endorsement in 2003. Pursuant to Colorado Revised Statute §23-1-121, institutions of higher education with approved educator preparation programs must be evaluated not more frequently than once every five years.

Educator Preparation Program Reauthorization Process

The following delineates the path of an educator preparation program submitted for reauthorization to CDHE and CDE:

- Endorsement matrices, syllabi, and accompanying documentation are due to CDE six to nine months in advance of a reauthorization site-visit. Content reviews are completed prior to the visit and inform focus areas of content for the site visit team.
- An institutional report is submitted to CDHE and CDE 60 days prior to the scheduled site visit.
- CDHE reviews the institutional report and submitted evidence prior to the site visit to identify the unit and program strengths as well as potential areas for further review.
- CDHE compiles a list of evidence based on the unit's submissions to document the statutory performance criteria of reauthorization as well as any missing data and specific questions to clarify information submitted in the proposal.
- Reauthorization site visits are jointly conducted by CDHE and CDE. The site visit consists of an overview provided by program leaders and conversations with multiple groups of pertinent stakeholders both internal and external to the unit.
- CDHE and CDE jointly compile information from the institutional report and site visit reviews, including content review information from the educator quality standards. CDHE and CDE submit the draft report to the IHE.
- The IHE responds to the draft report in a rejoinder and can provide additional information and address any concerns within 30 days of receiving the draft report.
- CDHE and CDE finalize the reauthorization report.
- CDE forwards the report and a recommendation to the State Board of Education (SBE) for their consideration and vote.
- The SBE forwards their recommendation on program content to the CDHE, and the Colorado Commission on Higher Education (CCHE) has final determination of program reauthorization. Pursuant to C.R.S. §23-1-121, if the state board of education recommends that a program not be approved based on its content, the commission shall follow said recommendation by refusing approval of said program or placing said program on probation.

Reauthorization Site Team Members

The reauthorization site review team consisted of a representative from CDHE and CDE:

Brittany Lane, Ph.D., Director of Educator Preparation, Colorado Department of Higher Education;

Jennifer Kral, Educator Preparation Principal Consultant, Colorado Department of Education.

Site Visit Meetings and Protocol

The reauthorization review team received the art education endorsement matrices, the institutional report, and accompanying documentation in advance of the site-visit, prepared and submitted by RMCAD. The outbreak of COVID-19 during 2020 resulted in mandates from the Department of Public Health & Environment via the Governor to restrict non-vital interactions; as a result, an onsite reauthorization site-visit was not allowable. RMCAD was able to set up zoom meetings to provide site-visit team members virtual access to stakeholders who would have otherwise been on campus. RMCAD created all the necessary Zoom meetings and links for the required site review interviews. This technology provided both video and audio accessibility between stakeholders and site-team members. The technology also afforded continuous conversations throughout the entire day because travel and movement between physical spaces were not required. The site visit team acknowledges and appreciates the quick and intentional ways in which RMCAD was able to respond to the pandemic and create a seamless visit.

The site-team members met virtually with the following groups and individuals:

- RMCAD Art Education Leadership:
 - Kristin Kipp, Chair of Education
 - Theresa Clowes, Head of Art Education and Placement Coordinator
- RMCAD Leadership:
 - Brent Fitch, President
 - Lynette Jachowicz, Dean of Faculty
 - Neely Patton, Senior Vice President of Academic Affairs
- Art education Faculty
 - Theresa Clowes, Head of Art Education and Placement Coordinator
 - Andrea Slusarski, Art Education Professor
 - Sarah Hiris, Art Education Adjunct Professor
- Admissions, Advising, and Financial Aid
 - Brian Belliveau (admissions)
 - Sean Heybour (admissions)
 - Bonnie Nathanson (admissions)
 - Rick Einstein (admissions)
 - Tracy Craven (FA)
- Current candidates and alumni
- K-12 partner site mentors

The team reviewed RMCAD's institutional report, course syllabi, Praxis scores from the last 5 years, a range of other documents prior to, over the course of, and subsequent to the site visit. The team heard from current students and alumni of the program, and their feedback is incorporated into this report.

Historical and current context: Rocky Mountain College of Art and Design Educator Preparation Program

The following description is taken from RMCAD's institutional report:

Rocky Mountain College of Art + Design (RMCAD) is a private, proprietary Colorado institution of higher education offering undergraduate and graduate degrees delivered on-campus and online in the visual arts and design, and related disciplines. Phillip J. Steele founded Rocky Mountain School of Art (RMSA) in 1963. It was originally located in downtown Denver. The College moved to Denver's Capitol Hill neighborhood in 1965, then relocated again in 1987 to a facility in southeast Denver that could accommodate enrollment growth and was renamed Rocky Mountain College of Art and Design. Finally, in 2003, the College moved to the current 23-acre campus in Lakewood, as it required even more diverse space for new programs and a growing student body.

In 2003, Rocky Mountain College of Art + Design received regional accreditation from the Higher Learning Commission (HLC) and was granted authorization by the Colorado Commission on Higher Education to operate in Colorado. The National Association of Schools of Art and Design (NASAD) has accredited RMCAD's visual arts and design programs since 2003, and the Council for Interior Design Accreditation (CIDA) has accredited RMCAD's Bachelor of Fine Arts in Interior Design since 2001. The Bachelor of Fine Arts in Art Education has been authorized by the Colorado Department of Education (CDE) and Department of Higher Education (DHE) to offer an Education Preparation program that leads to a Colorado Teacher Licensure since 2003.

Developments since the last visit include the hire of Chris Spohn as President in 2017. (Mr. Spohn served as president until April 29, 2020, at which time he resigned to pursue other professional opportunities). Under Mr. Spohn's leadership, the Executive team was expanded to include representation of major operational departments and the institution's Strategic Plan was revised to include annual strategic initiatives supported by departmental Objectives and Key Results (OKRs). The OKRs are developed individually by departments and executed cross-departmentally. The progress and completion of OKRs is reviewed at Quarterly Review Meetings (QRMs) that include the department and members of the Executive Team to ensure continuous improvement and adherence to the institution's mission, vision, and values. Institutional enrollment has grown steadily over the last five years with the addition of new programs. In 2019, RMCAD received approval to offer the Art Education program online. RMCAD presently offers online degrees in Animation, Game Art, Education Media Design and Technology, Fashion Design, Graphic Design, Illustration, Illustrative Design, Interior Design and Photography.

Part II. Reauthorization Findings:

A. Introduction

Overall, the site-visit team was impressed with:

- The depth and skill of candidates as artists;
- A shared set of values, including a history and a vision of service, that supports and sustains the art education program;
- The intentional construction of an online program that supports the state's needs for visual art teachers across the state to include those who might otherwise not be able to access an art educator program;
- Candidates and alumni seem very "grounded." Current partnerships with schools and other community organizations afford candidates a lot of exposure and opportunities which support candidates and the role of artists/ art teachers in the area;
- How responsive RMCAD is to school partners and because of RMCAD's size, can pivot quickly to respond to district partner/data feedback, e.g., adding more on art history to improve Praxis pass rates.

Students

- Expertise of instructors; mentioned that as the reason candidates chose RMCAD, “only Art Ed in an Art School
- Connection to the art community

Staff and faculty

- “Student first” philosophy
- Culture, climate, and sense of community
- Improvements to curriculum

B. Level of Proficiency

The following table is a summary of each indicator the site review team uses to review educator preparation programs pursuant to C.R.S. §23-1-121(2). Based on the site review findings, each measure is given an overall rating of proficient, partially proficient, or not proficient. Table 1 shows the level of proficiency for each performance-based measure.

Table 1: RMCAD’s Level of Proficiency

Educator Preparation Performance Measures	Proficient	Partially Proficient	Not Proficient
A. Admissions Systems: The unit maintains a comprehensive admissions system that includes screening of a candidate’s dispositions for the field in which he or she is seeking licensure, consideration of a candidate’s academic preparation for entry into his or her desired endorsement area or areas, and preadmission advising for students who are considering becoming candidates.	X		
B. Ongoing Advising and Screening of Candidates: The unit provides ongoing advising and screening of candidates by practicing educators or college and university faculty members.	X		
C. Coursework and Field-Based Training Integrate Theory and Practice: The coursework and field-based training integrates theory and practice and educates candidates in methodologies, practices, and procedures of teaching standards-based education, specifically in teaching the content and skills defined in the Colorado Academic Standards.	X		
D. Supervised Field-Based Experience: Each teacher candidate in an initial licensure program completes a minimum of 800 hours; each principal and administrator candidate completes a minimum of 300 hours; and each candidate for other advanced degrees or add-on endorsements completes appropriate supervised field-based experience that relates to predetermined learning standards and includes best practices and national norms related to the candidates’ endorsement.		X	
E. Content and skills required for licensure: Demonstrate content skills required for licensure , as determined by the State Board of Education.	X		

F Comprehensive, Ongoing Assessment: There is comprehensive and ongoing evaluation of each candidate’s subject matter and professional knowledge and ability to demonstrate skill in applying the professional knowledge.	X		
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C. Recommendation

The reauthorization team recommends reauthorization of the approved endorsement area listed in Table 2. Statute 23-1-121 indicates that reauthorization lasts for a period of no less than five calendar years. RMCAD’s next reauthorization can take place no sooner than 2025.

Table 2: Approved Endorsement Areas for Rocky Mountain College of Art and Design

Visual Arts	4.04
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Part III. Report by Reauthorization Site Review Team

A. Statutory Performance Measures

Statutory Performance Measure A: Admissions Systems: The unit maintains a comprehensive admissions system that includes screening of a candidate’s dispositions for the field in which he or she is seeking licensure, consideration of a candidate’s academic preparation for entry into his or her desired endorsement area or areas, and preadmission advising for students who are considering becoming candidates.

Summary finding: The reauthorization team finds RMCAD’s art education preparation proficient on Performance Measure A. *Performance indicators: A1, A2, A3; C.R.S. 23-1-121(a).*

RMCAD has an open enrollment policy which allows all students with artistic potential admission. This policy supports traditional students, career changers, and transfer students alike all of which describe a seamless process. New enrollees are admitted to the art education program upon acceptance. In an early interview with art education faculty, dispositions are informally assessed and then revisited at different benchmarks throughout the program allowing candidates who might not be a fit to be counseled out early if necessary.

Visual Arts continues to be a [shortage area](#) across Colorado in both rural and non-rural areas. The State appreciates RMCAD’s responsiveness by adding an online pathway for art educators. Such an option opens opportunities to reach prospective candidates from all over the states. Furthermore, the State appreciates RMCAD’s efforts to recapture prior students and the opportunity for alumni to return to retake a class, or “renew” an updated course. These are examples of the entire college’s commitment as true educators.

Areas for Improvement: N/A

Recommendations:

- Consider how RMCAD can intentionally recruit more faculty and candidates of color from across the state.

Statutory Performance Measure B: Ongoing Advising and Screening of Candidates: The unit provides ongoing advising and screening of candidates by practicing educators or college and university faculty members.

Summary finding: The reauthorization team finds RMCAD’s art education preparation program proficient on Performance Measure B. *Performance indicators: B1; C.R.S. 23-1-121(b)*

RMCAD has been making improvements in the ability to advise and position candidates to be successful. Candidates, particularly transfer students, described difficulty in obtaining regular, clear, and consistent advising. Efforts have been made, however, to provide a stable advising staff and communication between advising and the art education department is excellent.

The core value that “students come first” is apparent in all aspects of a candidate’s preparation and a strong focus on student success was mentioned by both faculty and staff. Though the State understand that not all who are admitted are necessarily a good fit to become teachers, the retention (58%) and graduation (29%) rates warrant closer examination. Though several supports such as tutoring, Praxis study sessions, and financial aid advisement exist, further analysis should be conducted to determine the reason.

Areas for Improvement: N/A

Recommendations:

- Candidates attend RMCAD to for the education program in an art school. That is, candidates and staff both report that when students apply to the art education program at RMCAD, they enter with a passion to be teachers – students rarely just end up being in art education. And, though candidates know they can attend other colleges and universities to become art teachers (in fact, they have likely transferred from one) they choose RMCAD because it is an art school .What are the specific policies and procedures in place to ensure retention?
 - Consider some type of exit interview or tool to examine attrition.
 - Examine the rates current student support services are being used by art education candidates to determine which be underutilized.
 - Consider a focus group with current students to discuss how likely they are to persist, and what needs they might have to ensure they do.

Statutory Performance Measure C: Coursework and Field-Based Training Integrate Theory and Practice: Coursework and field-based training integrates theory and practice and educates candidates in methodologies, practices, and procedures of teaching standards-based education, specifically in teaching the content and skills defined in the Colorado Academic Standards.

Summary finding: The reauthorization team finds RMCAD’s art education preparation program proficient on Performance Measure C: Coursework and Field-Based Training Integrates Theory and Practice. *Performance indicators: C1, C2, C.R.S. 23-1-121(c).*

The integration of theory and practice is a real strength of RMCAD’s art education program. Connections between learning goals in coursework and field experiences is explicit and candidate’s report that they feel their coursework is very valuable, applicable, and relevant.

RMCAD has typically prepared candidates for the Denver metro areas. Having had at least one placement in a Title I school and other settings helps ensure that candidates have experience with diverse learners. Now with the online program, RMCAD's reach can expand to other metro and rural areas across the state. RMCAD faculty and staff are cognizant of not just the demographic differences but also the unique needs of online learners.

RMCAD faculty model excellent teaching by providing performance-based assignments and assessments. Additionally, allowing candidates opportunities to choose how they will show their competence is a great way for them to see how important it is that learning be student-centered and how that can look in their own classrooms.

Areas for Improvement: N/A

Recommendations:

- Candidates couldn't really articulate any clear benchmarks or other indicators for recognizing their progress as novice teachers other than grades and feedback on assignments. Perhaps the few candidates we spoke with just failed to mention it but consider having students and mentors participate in the portfolio reviews so that candidates have a better understanding of their pedagogical skill development.

Statutory Performance Measure D: Supervised Field-Based Experience: Each teacher candidate in an initial licensure program completes a minimum of 800 hours; each principal and administrator candidate complete a minimum of 300 hours; and each other advanced degree or add-on endorsement candidate completes appropriate supervised field-based experience that relates to predetermined learning standards and includes best practices and national norms related to the candidate's endorsement.

Summary finding: The reauthorization team finds RMCAD's art educator preparation program partially proficient on Performance Measure D. *Performance Indicators: D1, C.R.S. 23-1-121(d).*

RMCAD candidates gain the minimum amount of 800 field and clinical experience hours required by the State. Candidates indicate that there is a worksheet from which to choose sites for observations and field experiences. Candidates also report that there are meaningful assignments leading up to field experiences and reflection assignments due afterward. Candidates and mentors both report that clinical experience placements are made very thoughtfully and determined according to the candidate's personality and preparation needs.

Mentors report that communication with faculty is excellent and that faculty are always open to feedback about the program. They all suggested that the expectations of them and their responsibilities are clear. Mentors state RMCAD is very responsive when issues arise in the field and are quick to adjust while maintaining the rigor and integrity of placements. Mentors mentioned that they appreciate how well RMCAD candidates are prepared adding that art education candidates' content knowledge is second to none. Mentors also noted that RMCAD candidates interact with (K-12) students very naturally.

Mentors did not discuss any type of training or norming that might take place to prepare them for coaching candidates. Though it's clear that the art education department takes great care to vet potential mentors, it is less clear what type of training the mentors themselves might receive and what feedback they get on their skills from RMCAD faculty. It is important that candidates receive clear and consistent feedback and that faculty supervisors and mentors are using a shared language and evaluation tools to support them. This is extremely important for all candidates, but perhaps even more so for candidates in

the online program. Since faculty supervisors will not have the same opportunities to observe online candidates and process with them and their mentors afterward, clear procedures and standards should be established well ahead of time to ensure online candidates receive the same level of support in-person candidates do.

Areas for Improvement:

- How are mentors recruited, onboarded, supported, developed and recognized? Given the key role that field experiences play in candidates' growth and development, how do program leaders and faculty work with mentors to ensure candidates are fully supported?
 - Consider more active mentor training rather than the proposed videos.
- What kinds of experiences and procedures does RMCAD establish so that candidates are set up for short and long-term success?
 - Consider an online tool that aids in observing (distance) candidates and providing feedback.

Statutory Performance Measure E: Content and Skills Required for Licensure: Each candidate, prior to graduation, must demonstrate the skills required for licensure, as determined by the State Board of Education.

Summary finding: The reauthorization team finds the educator preparation program at RMCAD proficient on Performance Measure E. *Performance Indicators: EI, C.R.S. 23-1-121(e)*,

Rocky Mountain College of Art and Design submitted content aligned to the Visual Arts endorsement area in which they are seeking reauthorization in summer of 2020 and it was reviewed fall of 2020 prior to the site visit. The alignment to individual standards is clearly defined by RMCAD Course Learning Outcomes as well as Evidence of Learning outcomes described per course. All teacher quality standards, art content standards, and EL standards are addressed adequately. Reading in the content course AE 3240 which is still in process of updated alignment might be an appropriate place for introduction of literacy standards. Candidates spoke highly of the equity course that was recently revised and reported they felt prepared to teach diverse learners.

Program leaders spoke to the systems in place in how curriculum and coursework is designed and developed. In the process the Colorado endorsement standards and the teacher quality standards drive the assignments, curriculum, and assessments built into the courses. Faculty model how learning is constructed so that pre-service teachers can take this same approach into their classrooms. Rubrics and assessments are used to measure candidate progress throughout each course.

Not all candidates were passing the Praxis test, thus the program did a deeper dive into where the candidates were struggling. Through this deep dive, it was determined candidates were struggling with art history content. In response, the program has made changes to this course to include content that is more closely aligned with the content assessment, Praxis.

Several candidates have completed the program and have gone out of state to teach in K-12 settings while several other candidates have also completed the program and have found art education positions outside the k-12 setting.

Areas for Improvement: N/A

Recommendations:

- How do you ensure consistency of standard alignment with adjunct faculty?
- An area to explore, how many candidates stay in CO and teach in a K-12 setting, how many are going out of state to teach in a K-12 setting, and what percentage of candidates are using their art education skills outside K-12, and if they teach outside of K-12 – why?
- Continue to monitor Praxis data and support candidates as needed in passing the content assessment.

Statutory Performance Measure F: Comprehensive, Ongoing Assessment: Comprehensive and ongoing evaluation of each candidate’s subject matter and professional knowledge and ability to demonstrate skill in applying the professional knowledge base.

Summary finding: The reauthorization team finds RMCAD’s art education program proficient on Performance Measure F. *Performance Indicators: F1, F2, F3, C.R.S. 23-1- 121(f).*

RMCAD engages in consistent data collection to make programmatic changes and improvements. RMCAD has a comprehensive program review and assessment plan based on course, program, and institutional learning outcomes. Assessment results, student surveys, and Praxis licensure exams have led to changes in courses and programming, for example, a stronger emphasis on art history.

Though significant improvements have been made to collect and analyze data internally, a more structured and formal approach to collecting external data would be helpful.

Areas for Improvement: N/A

Recommendations:

- As the program continues to evolve and grow (in enrollment), how might RMCAD plan to disaggregate the data to examine candidates and completers?
 - Faculty and staff mentioned seeking an alumni and a mentor teacher survey. This would provide other important data points to include.

Part IV: Rejoinder and Next Steps

- RMCAD shall note any errors of fact in this report and respond in a rejoinder with any supplemental information requested within 30 days, pursuant to Colorado Department of Higher Education Policy I-P: Educator Preparation, subsection 6.01.05.01.
 - Please send all correspondence regarding DHE performance measures A, B, C, D, and F to Dr. Brittany Lane, Director of Educator Preparation, CDHE, brittany.lane@dhe.state.co.us
 - Please send all correspondence regarding the CDE content review (Performance Measure E) to Jen Kral, Educator Preparation Principal Consultant, CDE, kral_j@cde.state.co.us.
- CDHE and CDE will finalize the reauthorization report.

- CDE will forward the report and a recommendation to the State Board of Education (SBE) for their consideration.
- SBE will decide upon a recommendation and forward that recommendation to the DHE, which will then forward the final recommendation to the Colorado Commission on Higher Education (CCHE) for their determination of reauthorization.

The reauthorization team sincerely thanks the administration, faculty, staff, and students for participating in the reauthorization review and site visit for Rocky Mountain College of Art and Design's art endorsement program. We especially recognize the exceptional efforts to coordinate a completely online site-visit due to COVID-19. We look forward to working with RMCAD to address the needs of art teachers now and in the future.

TOPIC: RECOMMEND APPROVAL OF REVISED CCHE CAPITAL CONSTRUCTION AND RENEWAL SCORING CRITERIA

PREPARED BY: LAUREN GILLILAND, LEAD FINANCE ANALYST

I. SUMMARY

This action item recommends the approval of revised CCHE capital construction / capital renewal scoring criteria. These criteria are used to prioritize capital construction and renewal requests submitted to CDHE/CCHE for state funding.

II. BACKGROUND

Under C.R.S. 23-1-106, the Colorado Commission on Higher Education (CCHE) must submit a list of prioritized capital construction and renewal projects to the Capital Development Committee (CDC) on or before November 1st of each year. CCHE does not recommend a specific funding level, only a prioritization of projects submitted by institutions requesting state funding.

The CCHE has broad authority in the manner of prioritizing submitted projects. For the past seven years, the CCHE has used the capital construction / renewal criteria in Attachment A to score projects. Over the course of 2020, a working group of four commissioners and CDHE staff completed a comprehensive review of the original capital construction / renewal scoring criteria and explored revisions. This process has included several rounds of stakeholder feedback from institutions of higher education, the Office of State Planning and Budgeting, the Office of the State Architect, legislators, Capital Development Committee staff, and Joint Budget Committee staff.

At its final meeting on January 14th, 2021, the working group agreed on the revised criteria in Attachment B. Key themes of the revision include minimizing subjectivity, increased flexibility for governing boards in their internal prioritization of projects, lower and more equitable cash contribution point thresholds, and an emphasis on maintaining existing buildings and reducing deferred maintenance. The working group believes these changes promote objectivity, equitability, and cost containment in line with the Commission's values and The Affordability Roadmap.

On January 22nd, 2021, the Fiscal Affairs and Audit Committee approved the revised Capital Construction / Renewal Scoring, and forwarded to the full Commission for vote.

III. STAFF ANALYSIS

After seven years, the existing capital construction / renewal scoring criteria warranted a comprehensive review. The revised criteria created by a working group of Commissioners and Department staff are more objective, equitable, and focused on maintaining existing buildings and reducing deferred maintenance.

IV. STAFF RECOMMENDATIONS

Staff recommends Commission approval of the revised CCHE capital construction/renewal scoring criteria.

V. STATUTORY AUTHORITY

C.R.S. 23-1-106 (7)(A) "...The commission shall annually transmit the recommended priority of funding of capital construction or capital renewal projects to the capital development committee no later than November 1 of each year."

ATTACHMENTS:

ATTACHMENT A: Existing Capital Construction / Renewal Scoring Criteria

ATTACHMENT B: Revised Capital Construction / Renewal Scoring Criteria

FY 2021-22 Scoring Criteria for Capital Construction/Renewal Projects

#1 Health, Life Safety, and Code Issues

Projects with clear and urgent life or safety implications.

ALL INSTITUTIONS	
Health, Life Safety, and Code Issues	Points
A new building for a new program or to mitigate space needs. ¹	N/A - points would not be applied to denominator
Level 3 Controlled Maintenance or less than 20 years since last remodel.	3
Level 2 Controlled Maintenance or 20-30 years since last remodel.	4
Level 1 Controlled Maintenance or 31-40 years since last remodel.	6
Greater than Level 1 Controlled Maintenance/Capital Renewal or Greater than 40 years since last remodel.	8
Documentation from a qualified engineer, fire marshal, attorney, or other qualified third-party professional that there is a very significant legal and/or health/life safety risk. ²	2
TOTAL	/10

Clarifications:

¹ N/A for both new buildings and for capital construction where more than 50% of square footage is new square footage.

² Two point bonus may also be awarded if the State Architect deems the project a capital renewal project predominantly based on life safety/loss of use or is a mandated or continuation project.

#2 Other Fund Sources¹

Including projects that are funded partly by non-State funds and non-student fee funds.

RESEARCH INSTITUTIONS	
<i>Cash Contribution of Total Funds Requested</i>	<i>Points</i>
No cash contribution	0
1-9%	6
10-19%	8
20-29%	10
30-39%	12
40-50%	14
Over 50%	15
Use of student fees	Point total *.75
Other Fund Sources Total	/15
FOUR YEAR INSTITUTIONS AND COLORADO SCHOOL OF MINES	
<i>Cash Contribution of Total Funds Requested</i>	<i>Points</i>
No cash contribution	0
1-8%	6
9-16%	8
17-24%	10
25-32%	12
33-40%	14
Over 40%	15
Use of student fees	Point total *.75
Other Fund Sources Total	/15
COMMUNITY COLLEGES AND AHEC	
<i>Cash Contribution of Total Funds Requested</i>	<i>Points</i>
No cash contribution	0
1-5%	6
6-10%	8
11-15%	10
16-20%	12
21-25%	14
Over 25%	15
Use of student fees	Point total *.75
Other Fund Sources Total	/15

Clarifications:

¹ Revised request is allowable if additional cash funds become available after initial submission, but before final rankings.

#3 Space Needs Analysis

Reflects how much space the institution or department has in its inventory, justification on how well the space needs are filled by the request, and how much space it needs based on the Master Plan, FTE projections, or student enrollment projections.

ALL INSTITUTIONS	
Space Needs	Points
No Space Needs/Capital Renewal. ¹	N/A - points would not be applied to denominator
Programmatic space needs, not necessarily a shortage of space. ²	5
Large space needs but not as pressing and does not cause a waiting list for programs. Does not affect the general population but addresses a specific need or problem. ³	7
Massive space needs (usually including waiting lists or “bottleneck programs”) that affect the general population. ⁴	9
Waiting lists in place for courses due to space and affects one of the “Top 30 Occupations with Highest Projected Opening with More than Half of Workers with Postsecondary Experience” included in the most recently released Skills for Jobs report. ⁵	10
TOTAL	/10

Clarifications:

¹ N/A for capital renewal as defined by the Office of the State Architect.

² 5 points - No obvious, significant current space deficits that will be addressed by the project

³ 7 points - Must be a significant need for space that the project will help alleviate. Project only impacts subset of campus Population.

⁴ 9 points - Project must impact entire campus population. Permissible for some to benefit more than others. but must have meaningful impact on all. Alleviates bottlenecks, but this is not strictly limited to existing course waiting lists. May also refer to space deficits limiting admission of qualified candidates to various programs.

⁵ 10 points - As described above and affects an occupation on Charts 6, 8 or 10 on this list:

<https://www.bls.gov/careeroutlook/2017/article/occupational-projections-charts.htm>

#4 Clear Identification of Beneficiaries

Request must clearly identify the individuals that will be served and how they will be served better by the project requested.

ALL INSTITUTIONS	
Clear Identification of Beneficiaries	Points
Affects mostly faculty office space.	2
Affects some students or only faculty research.	4
Affects most students. ¹	6
Affects whole campus. ²	8
TOTAL	/8

Clarifications:

¹ “Most” means 50%, and request must specify how that standard is met.

² As described above. “Whole campus” includes students, faculty and visitors. Impact does not have to be even across parties but must be meaningful to all.

#5 Achieves Goals¹

(Integral to achieving Statewide policy goals/integral to institutional planning goals including: Higher Education Master Plan, State Goals and Needs, Institutional Facilities Master Plan, Institutional Strategic Plan, and 5-year needs list)

ALL INSTITUTIONS	
Achieves Goals	Points
Does not articulate any goals that are met.	0
Missing 4 goals.	1
Missing 3 goals.	2
Missing 2 goals.	3
Missing 1 goal.	4
Meets goals/aligns with: Higher Education Master Plan, State Goals and Needs, Institutional Facilities Master Plan, Institutional Strategic Plan, and 5-year needs list.	5
TOTAL	/5

Clarifications:

¹ Project request aligns with one Higher Education Master Plan goal (1 point), one state goal or need (1 point), the institution's facilities master plan (1 point), the institution's overall strategic plan (1 point), and it should be submitted on the 5-year needs list (1 point). Project's alignment with each of these goals must be articulated explicitly in the request.

#6 Governing Board Priority¹

Projects will receive points based upon the priority that the governing board has assigned to each project.

CU and CSU SYSTEM	
Governing Board Priority	Points
Higher than Sixth Priority	2
Sixth Priority	4
Fifth Priority	6
Fourth Priority	10
Third Priority	15
Second Priority	17
Top Priority	20
Total	/20
OTHER 4-YEAR INSTITUTIONS, COLORADO SCHOOL OF MINES, AND AHEC	
Governing Board Priority	Points
Higher than Sixth Priority	2
Sixth Priority	4
Fifth Priority	6
Fourth Priority	8
Third Priority	10
Second Priority	15
Top Priority	20
Total	/20
COMMUNITY COLLEGES	
Governing Board Priority	Points
Higher than Sixth Priority	2
Sixth Priority	6
Fifth Priority	8
Fourth Priority	12
Third Priority	15
Second Priority	17
Top Priority	20
Total	/20

Clarifications:

¹ Governing board priority order may not be changed after initial submission.

Colorado Commission on Higher Education Capital Scoring Criteria

#1 Health and Safety

ALL INSTITUTIONS	
Health and Safety	Points
Predominantly new GSF. ¹	N/A - points would not be applied to denominator
Less than 20 years since last major renovation. ²	4
20-30 years since last major renovation.	6
31-40 years since last major renovation.	8
Greater than 40 years since last major renovation.	10
TOTAL	/10

Bonus Points:

Office of the State Architect deems project is level 2 capital renewal ³	+1
Office of the State Architect deems project is level 1 capital renewal ⁴	+2
TOTAL	/0

¹More than 50% of impacted GSF is new GSF.

²Major renovation is defined as a renovation costing at least 25% of the insured value of the building at the time of renovation.

³Level 2: Request is predominantly based on operational disruptions/energy inefficiencies/environmental contamination.

⁴Level 1: Request is predominantly based on life safety/loss of use or is a mandated or a continuation project.

#2 Reduction of Deferred Maintenance

ALL INSTITUTIONS	
Reduction of Deferred Maintenance¹	Points
Does not address deferred maintenance backlog.	0
1-5% of project budget dedicated to reducing related deferred maintenance.	1
6-10% of project budget dedicated to reducing related deferred maintenance.	2
11-25% of project budget dedicated to reducing related deferred maintenance.	3
26-50% of project budget dedicated to reducing related deferred maintenance.	4
Greater than 50% of project budget dedicated to reducing related deferred maintenance.	5
TOTAL	/5

¹Institution must describe and quantify deferred maintenance being addressed in request narrative or reference a controlled maintenance request.

#3 Other Fund Sources^{1,3,4,5}

GROUP 1: ASU, CSU-P, FLC, UNC, WCU	
Cash Contribution of Total Funds Requested	Points
1-2%	2
2-3%	4
3-4%	6
Over 4%	8
GROUP 2: CCCS Urban/Suburban Campuses²	
1-3%	2
3-6%	4
6-8%	6
Over 8%	8
GROUP 3: CMU, MSU	
1-4%	2
4-7%	4
8-10%	6
Over 10%	8
GROUP 4: CSM, CSU-FC, CU	
1-8%	2
8-16%	4
17-25%	6
Over 25%	8
Other Fund Sources Total	/8

¹AHEC, CCCS-Lowry, and CCCS Rural Campuses (CNCC, LCC, MCC, NJC, OJC, PCC, and TSJC) are exempt.

²CCCS Urban/Suburban Campuses are ACC, CCA, CCD, FRCC, PPCC, and RRCC.

³Pledged cash contributions may not be changed after initial submission for scoring purposes, unless there is documented proof of a late gift or award that was not final at the time of initial submittal, but became available prior to the final CCHE Fiscal Affairs and Audit Committee (FAA) prioritization vote. Supporting materials must be submitted to the CDHE and FAA at least one day prior to the August FAA meeting. If non-gift additional funds become available, an increase in cash spending authority may be requested without scoring impact.

⁴Student fees are discounted at 75%.

⁵The following prior cash contributions may be counted toward this criterion at 75%: (1) Program plan development, (2) Purchase of land made less than five years prior to request submission deadline. If such land has been used for revenue generating purposes in the meantime, the value of that revenue must be deducted. Please include past cash contributions in your narrative write up, not the cost detail form.

#4 Space Needs Analysis

ALL INSTITUTIONS	
Space Needs	Points
No Space Needs/Capital Renewal.	N/A - points would not be applied to denominator
Programmatic space needs, not necessarily a shortage of space.	5
Space need alleviated.	7
Space need alleviated and impacts course/program waitlists, capped programs for which there is excess demand, or new programs that cannot be reasonably located elsewhere.	9
Impacts one of the top 10 occupations with the highest projected openings at the relevant education level (associate's/postsecondary nondegree award; bachelor's; master's/doctoral/professional) in the most recent Bureau of Labor Statistics projections. ¹	+1
TOTAL	/10

¹ Lists of the top 10 occupations with the highest projected openings at the relevant education levels will be sent out by CDHE annually.

#5 Achieves Master Plan Goals

ALL INSTITUTIONS	
Achieves Goals	Points
Articulates request’s alignment with one or more of the strategic goals in the Colorado Higher Education Master Plan, <i>Colorado Rises</i> . ¹	5
TOTAL	/5

¹<http://masterplan.highered.colorado.gov/read-colorado-rises/>

#6 Governing Board Priority¹

INDIVIDUAL INSTITUTIONS NOT IN A SYSTEM & AHEC	
Cash Contribution of Total Funds Requested	Points
37 points to distribute across all projects, with a maximum of 20 points per project.	0-20
COLORADO STATE UNIVERSITY SYSTEM	
52 points to distribute across all projects, with a maximum of 20 points per project.	0-20
UNIVERSITY OF COLORADO SYSTEM	
64 points to distribute across all projects, with a maximum of 20 points per project.	0-20
COLORADO COMMUNITY COLLEGE SYSTEM	
96 points to distribute across all projects, with a maximum of 20 points per project.	0-20
Other Fund Sources Total	/20

¹Governing board priority order may not be changed after initial submission, except for when a project is withdrawn from consideration. If a governing board withdraws a project from consideration, any projects prioritized below the withdrawn project will move up one rank in priority level and be rescored accordingly. In order to have projects rescored, the CDHE and C CHE Fiscal Affairs and Audit Committee (FAA) must be informed of the withdrawal at least one day prior to the August FAA meeting.

TOPIC: **Impacts of the Pandemic- Perspectives from 2-year and technical colleges**

PREPARED BY: **Dr. Kim Poast, Chief Student Success & Academic Affairs Officer**

I. SUMMARY

This discussion item is intended to be a broad discussion of the current and future impacts of the pandemic on students at two year and technical colleges. Panelists will present data on enrollment, retention, and student success metrics, as well as disaggregated metrics on race, income, and first-generation status, where applicable. Panelists also will also discuss the academic and operational experiences and considerations for the future.

Panelists will include:

1. **Dr. Landon Pirius-** Vice Chancellor for Academic and Student Affairs, Colorado Community College System
2. **Dr. Russ Rothamer-** Executive Vice President, Aims Community College
3. **Dr. Kathryn Regjo,** Vice President of Academic Affairs, Colorado Mountain College
4. **Dr. Linda Van Doren,** Vice President of Education, Leadership, Emily Griffith Technical College
5. **Carl Einhaus,** Senior Director of Student Success & P20 Alignment, CDHE
6. **Dr. Kim Poast,** Chief Student Success & Academic Affairs Officer (moderator)

II. BACKGROUND

N/A

III. STAFF ANALYSIS

N/A

IV. STAFF RECOMMENDATIONS

N/A

V. STATUTORY AUTHORITY

N/A

ATTACHMENT(S):

PowerPoint slides to be published 2/5/2021

TOPIC: ANNUAL REPORT TO THE COMMISSION ON THE EFFECT OF PRIOR LEARNING ASSESSMENT ON STUDENT PROGRESSION AND COMPLETION

PREPARED BY: CARL EINHAUS, SENIOR DIRECTOR OF STUDENT SUCCESS & P-20 ALIGNMENT AND CHRISTINA CARRILLO, ACADEMIC POLICY OFFICER AND ADVOCATE

I. SUMMARY

This presentation will update the Commission on efforts to evaluate the efficacy of prior learning assessment at public institutions of higher education in Colorado through a case study from Pikes Peak Community College. Guest presenters are Paul DeCecco and Alberto Teixeira.

II. BACKGROUND

The Commission approved revisions to the Prior Learning Assessment (PLA) Policy at its May 4, 2018 meeting. The primary changes incorporated into the revised policy include the following:

- Established that institutions are required to award GT Pathways credit to students who earn a given score on selected examinations or assessments, including CLEP (College Level Examination Program), AP (Advanced Placement), IB (International Baccalaureate), and DSST (DANTES Subject Standardized Tests).
- Established that institutions are required to offer GT Pathways credit for military courses and occupations, and Defense Language Proficiency Test completions, that appear on Joint Services Transcripts.
- Charged the Department with developing a process for evaluating the efficacy of the revised policy, articulated in sub-section 7.2, which states:

The department shall work with the institutions to evaluate PLA data and progress annually: The department should collect PLA data from IHE's, and provide annual reporting to CCHE on the effect of PLA on student progression and completion. The department should determine the PLA data elements and create an evaluation and reporting progress. The department should use such data to inform any changes to the PLA policy.

III. STAFF ANALYSIS

Most institutions in Colorado have been awarding credit for selected forms of prior learning assessment for some time. For example, Advanced Placement exams and the International Baccalaureate diploma are long-standing and widely acknowledged methods for students to demonstrate college-level learning. Fewer institutions had been engaged in awarding of credit for CLEP exams prior to 2018, and fewer still for exams associated with military experience. The Commission's revised PLA policy articulates a clear and consistent set of expectations for the awarding of credit by exam. It also requires institutions to develop processes to review the Joint

Services Transcript to determine credit awards for entries that are not included in published crosswalks and equivalency tables.

The Department is leveraging funds received in late 2020 from the Strada Education Network to work with institutions to create new and revised data elements to capture the awarding of credit for prior learning, and to connect that credit to student success, including:

- Persistence: relationship of PLA credit to continued enrollment from term to term and from year to year
- Completion: relationship of PLA credit to graduation with an associate or a bachelor's degree within certain timeframes
- Time to Degree: relationship of PLA credit to the total number of credits earned by completers of associate and bachelor's degrees

Additional data elements will include:

- Modality: impact of different forms of PLA—such as AP, IB, CLEP, DSST, military training/education, and work-based learning—on student success
- Student Demographics: in keeping with the Commission's Master Plan goal of erasing equity gaps, examining the relationship of PLA credit to success for students by race/ethnicity

While the full picture of the impact of PLA on student success—specifically degree completion—will not be known for some time, we do have examples of how PLA is making a difference at individual institutions. One of these institutions is Pikes Peak Community College, which serves a large active-duty military, veteran, and military family population, and awards thousands of credits annually to students in recognition of learning from military experience.

IV. STAFF RECOMMENDATIONS

This is an information item only; no formal action is required by the Commission.

STATUTORY AUTHORITY

§23-1-108.5(5) C.R.S. (concerning transferability of credits earned for GT Pathways courses)

§23-1-113.2(2) C.R.S. (concerning credit awarded for completion of the International Baccalaureate diploma program)

§23-1-125(1) C.R.S. (concerning student rights regarding transfer credit award and applicability)

§23-1-125(4) C.R.S. (concerning competency testing)

§23-1-125(4.5) C.R.S. (concerning institutional policies for determining credit for prior learning)

§23-5-145(2)(c) C.R.S. (concerning CCHE policy regarding institutional acceptance of transfer credit awarded by another institution for prior learning)

§23-5-145.5(9)(a) C.R.S. (concerning reporting to the General Assembly on credit awarded to students for prior learning from work experience and the demographics of said students)



COLORADO COMMISSION ON HIGHER EDUCATION

- Chair Vanecia Kerr (D- 6th Congressional District) 1st term ends June 2022
- Vice Chair Sarah Kendall Hughes (D-3rd Congressional District) 1st term ends July 2023
- Commissioner Paul Berrick Abramson (*U-7th Congressional District*) 1st term ends July 2023
- Commissioner Luis Colón (*R-4th Congressional District*) 2nd term ends June 2021
- Commissioner Teresa Kostenbauer (*U-4th Congressional District*) 1st term ends July 2024
- Commissioner Tom McGimpsey (R-2nd Congressional District) 1st term ends June 2021
- Commissioner Steven Meyer (*U-3rd Congressional District*) 1st term ends July 2024
- Commissioner Charlotte Olena (*D-1st Congressional District*) 1st term ends July 2023
- Commissioner Brittany Stich (*D-1st Congressional District*) 1st term ends July 2022
- Commissioner Steven Trujillo (*D-3rd Congressional District*) 1st term ends July 2023
- Commissioner Eric Tucker (*U-5th Congressional District*) 1st term ends July 2023

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- Representative Cathy Kipp, *House Majority Appointment*
- Representative Kevin Van Winkle, *House Minority Appointment*
- Senator Rachel Zenzinger, *Senate Majority Appointment*
- Senator Tammy Story, *Senate Majority Appointment*
- Senator Kevin Priola, *Senate Minority Appointment*

Subject Matter Advisors

- Mr. Wayne Artis, *Faculty Representative*
- Mr. Mark Cavanaugh, *IHEC Representative*
- Mr. Brad Baca, *Institutional Finance Representative*
- Dr. Landon Pirius, *Academic Council Representative*
- Ms. Misti Ruthven, *K-12 Representative*
- Ms. Leah Porter, *Parent Representative*





INSTITUTION AND SYSTEM LEADERS

<u>INSTITUTION</u>	<u>CEO</u>	<u>LOCATION</u>
Adams State University	Dr. Cheryl Lovell, President	Alamosa
Aims Community College	Dr. Leah Bornstein, President	Greeley
Community College System	Joe Garcia, Chancellor	Denver
Arapahoe CC	Dr. Diana Doyle, President	Littleton
Colorado Northwestern CC	Ron Granger, President	Rangely
CC of Aurora	Dr. Betsy Oudenhoven, President	Aurora
CC of Denver	Dr. Everette Freeman, President	Denver
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Otero JC	Dr. Timothy Alvarez, President	La Junta
Pikes Peak CC	Dr. Lance Bolton, President	Colorado Springs
Pueblo CC	Dr. Patty Erjavec, President	Pueblo
Red Rocks CC	Dr. Michele Haney, President	Lakewood
Trinidad State JC	Dr. Rhonda Epper, President	Trinidad
Colorado Mesa University	Tim Foster, President	Grand Junction
Colorado Mountain College	Dr. Carrie Besnette Hauser, President	Glenwood Springs
Colorado School of Mines	Paul Johnson, President	Golden
Colorado State System	Dr. Tony Frank, Chancellor	Denver
CSU-Ft Collins	Dr. Joyce McConnell, President	Fort Collins
CSU-Pueblo	Dr. Timothy Mottet, President	Pueblo
CSU-Global Campus	Vacant (8/1/2020)	Aurora
CU System	Mark Kennedy, President	
CU – Boulder	Dr. Philip DiStefano, Chancellor	Denver
UCCS	Dr. Venkat Reddy, Chancellor	Boulder Colorado
UCD	Dr. Dorothy Horrell, Chancellor	Springs Denver
UC-Anschutz	Don Elliman, Chancellor	Aurora, Denver
Emily Griffith Technical College	Stephanie Donner, Executive Director	Denver
Ft. Lewis College	Dr. Tom Stritikus, President	Durango
Metropolitan State University of Denver	Janine Davidson, President	Denver



Pickens Technical College	Teina McConnell, Executive	Aurora
Technical College of the Rockies	Allen Golden, Director	Delta
University of Northern Colorado	Dr. Andy Feinstein, President	Greeley
Western State Colorado University	Dr. Gregory Salsbury, President	Gunnison

COLORADO COMMISSION ON HIGHER EDUCATION - BYLAWS

Section 1. Organization and Meetings

- 1.1 **Organization:** Pursuant to C.R.S. §23-1-102, the Commission shall consist of eleven members appointed by the Governor with the consent of the Senate. The members of the Commission are selected on the basis of their knowledge of and interest in higher education and shall serve for four-year terms. No member of the Commission may serve more than two consecutive full four-year terms.
- 1.2 **Officers:** Pursuant to C.R.S. §23-1-110, the officers of the Commission shall be the Chair and Vice Chair. The Secretary shall be the Executive Director of the Commission and the Department and is a non-voting member of the Commission. The Governor appoints, with the consent of the Senate, the Executive Director to serve as the executive officer of the Commission and the Department.
- 1.3 All officers shall be elected at the May meeting of the Commission to serve a term of one year, except the Secretary whose term shall be coterminous with his or her term as Executive Director. Any member may nominate themselves or another member to be chair or vice-chair. Members will vote on each position; if there is more than one nomination the vote will be conducted by private ballot to be counted by the Secretary. Officers shall be limited to two consecutive terms, unless an exception is approved by a vote of more than 60 percent of the Commission. When possible, a Commissioner is encouraged to serve as vice-chair prior to becoming chair.
- 1.4 **Regular Meetings of the Commission:** The Commission shall adopt at the October Commission meeting a schedule of regular meetings of the Commission for the following calendar year.
- 1.3 **Notice of Meetings:** Any meetings at which the adoption of any proposed policy, position, resolution, rule, regulation, or formal action occurs or at which a majority or quorum of the body is in attendance, or is expected to be in attendance, shall be held only after full and timely notice to the public. In addition to any other means selected by the Commission for giving notice to the public, the Commission shall post notice of its meetings at the office of the Colorado Department of Higher Education located at 1560 Broadway, Suite 1600, Denver, Colorado 80202 and on the Colorado Department of Higher Education website. Notices shall be posted no less than two days prior to the holding of the meeting. The posting shall include specific agenda information where possible.
- 1.4 **Special Meetings:** Special meetings of the Commission may be held at the call of the Chair on two days' notice, or at the request of five members of the Commission who may petition the Chair to call such a meeting. Notice of special meetings shall be made electronically or by telephone and posted at the office and on the website of the Colorado

Department of Higher Education no less than two days prior to the meeting date.

- 1.5 **Conduct of Meetings:** The Chair shall preside at all meetings at which he or she is present. In the Chair's absence, the Vice Chair shall preside, and in the event both are absent, those present shall elect a presiding officer. All meetings shall be conducted in accordance with all State laws and regulations. The parliamentary rules contained in Robert's Rules of Order, latest revision, shall govern in all cases to which they are applicable, except as modified herein.
- 1.6 **Attendance at Meetings:** The term of any member of the Commission who misses more than two consecutive regular Commission meetings without good cause, as determined by the Chair, shall be terminated and his successor appointed in the manner provided for appointments under C.R.S. §23-1-102.
- 1.7 **Preparation of Agenda:** Meeting agendas shall be prepared by the Executive Director of the Department. A monthly agenda call will be scheduled with the Chair, Vice Chair, and Executive Director, or his or her designee, to discuss and approve the proposed agenda. At a regular or special meeting, an item of business may be considered for addition to the agenda by a majority vote of the Commissioners present.
- 1.8 **Minutes of the Commission:** The Secretary shall maintain an accurate set of minutes of Commission meetings, which shall include a complete record of all actions taken by the Commission. Such minutes shall constitute a permanent record. After the minutes of each meeting are completed they shall be reviewed by the Commission and, after approval, posted on the CCHE website and made available to the public for inspection upon written request.
- 1.9 **Standing Committees:** The Commission may create standing or ad hoc committees comprised of Commissioners to research and make recommendations on specific issues for the full Commission to consider and act on.

Section 2. Duties and Responsibilities of Officers

- 2.1 **Chair of the Commission:** The Chair of the Commission shall preside at meetings of the Commission at which he or she is in attendance.
- 2.2 **Vice Chair of the Commission:** The Vice Chair shall perform all duties of the Chair in the Chair's absence.
- 2.3 **The Secretary/Executive Director of the Commission:** In addition to performing those duties established by law, the Executive Director of the Commission and Department shall: (a) serve as the Secretary of the Commission, (b) meet with the officers and staff of institutions of higher learning as the needs dictate for a mutual discussion of the matters affecting the responsibilities of the Commission, (c) meet with appropriate state and federal groups and/or officials on matters pertaining to the Commission, (d) meet with appropriate committees of the General Assembly on matters pertaining to the

Commission's responsibilities, (e) appoint such professional staff as in his or her judgment are required and are within the budget approved by the Commission and for which funds are available, (f) prepare an annual operating budget and work program for approval by the Commission, (g) implement the policies of the Commission and communicate those policies to interested parties as appropriate.

Section 3. The Advisory Committee

3.1 There is hereby established an advisory committee pursuant to C.R.S. §23-1- 103).

Advisory Committee Members: The advisory committee shall consist of not less than thirteen members, to be designated as follows:

(a) Six members shall be appointed from the General Assembly, including three senators, two of whom shall be from the majority party, appointed by the President of the Senate and one of who shall be from the minority party appointed by the Minority Leader of the Senate, and three representatives, two of whom shall be from the majority party, appointed by the Speaker of the House of Representatives and one of who shall be from the minority party appointed by the Minority Leader of the House of Representatives. Said six members shall be appointed for terms of two years or for the same terms to which they were elected to the general assembly, whichever is the lesser. Successors shall be appointed in the same manner as the original members;

(b) One member shall be selected and designated by the Commission, as recommended by the Colorado Faculty Advisory Council, to represent the faculty in the state;

(c) One member shall be selected and designated by the Commission, as recommended by the Student Affairs Council, to represent the students in the state for a term of one year, commencing on July 1 of the year appointed;

(d) One member shall be selected and designated by the Commission who is a parent of a student enrolled in a state supported institution of higher education in Colorado to represent the parents of students for a term of two years, commencing on July 1 of the year appointed.

(e) Not more than four additional members representing educational or other groups may be selected and designated by the Commission to serve on the advisory committee.

The Commission has designated the four additional advisory committee members to represent:

- Chief Academic Officers of Colorado's state supported institutions of higher education, as recommended by the Colorado Academic Council;
- Chief Financial Officers of Colorado's state supported institutions of higher education, as recommended by the, as recommended by the Chief Financial Officers group;

- Independent Higher Education Institutions in Colorado (Colorado College, Regis, and Denver University), as recommended by the Independent Higher Education Council; and,
- The K-12 system, as recommended by the Colorado Department of Education.

All such appointments shall be for a term of two years, commencing on July 1 of the year appointed.

- 3.2 Notice and Agendas: All members of the advisory committee shall receive agendas and background material and be notified of all public meetings of the Commission and shall be invited to attend for the purpose of suggesting solutions for the problems and needs of higher education and maintaining liaison with the general assembly.
- 3.3 Recommendations of the Advisory Committee: The members of the advisory committee shall have full opportunity to present their views on any matter before the Commission.

Section 4. Change in Bylaws

- 4.1 Bylaws shall be subject to amendment at any meeting of the Commission provided any such proposed change is listed on the agenda in accordance with the procedure outlined in Section 1.5 Notice of Meetings. Bylaw changes must be approved by a majority of the Commission.

HISTORY: Adopted on September 10, 1965. Amended January 14, 1966; February 25, 1972; June 1, 1978; July 1, 1993; October 7, 2004; May 6, 2011; CCHE Agenda March 3, 2017 Item V; April 5, 2019

Higher Education Glossary

529 Savings Plan - 529 plans are more than just savings accounts. These state-sponsored college savings plans were established by the federal government in Section 529 of the Internal Revenue Code to encourage families to save more for college. They offer unique state and federal tax benefits you can't get from other ways to save, making them one of the best ways to save for college.

Accuplacer - A suite of computer-adaptive placement tests that are used as assessment tools at institutions to evaluate the level of course work for a student. Students measured as needing additional course work will be assigned to remediation.

Admission Standard - includes both Freshman and Transfer standard. The freshman standard applies to all in-state and out-of-state new freshmen applicants and to transfer applicants with 12 or fewer college credit hours, except freshmen and transfer applicants who meet one of the admissions standards index exemptions. The transfer standard applies to all degree-seeking undergraduate transfer applicants with more than 12 college credit hours who do not meet one of the exemptions

Admission Window - Defined in Admission policy, "The maximum allowable percentage of admitted students who are not required to meet the CCHE admission standards within a specific fiscal year is referred to as the admissions window. Separate windows exist for the freshmen and transfer standards. The allowable percentage is determined by the Commission." The percentages vary by institution.

CAP4K - SB08-212, Preschool to Postsecondary Education Alignment Act; Colorado Achievement Plan for Kids.

CHEA - Council for Higher Education Accreditation. As described on their website, CHEA is "A national advocate and institutional voice for self-regulation of academic quality through accreditation, CHEA is an association of 3,000 degree-granting colleges and universities and recognizes 60 institutional and programmatic accrediting organizations."

CIP - Classification of Instructional Program; The purpose of which is to provide a taxonomic scheme that will support the accurate tracking, assessment, and reporting of fields of study and program completions activity. (Relevant in Role & Mission)

CLEP - College Level Examination Program; Earn college credit for passing a subject specific examination.

COA - Cost of Attendance; in the context of financial aid, it is an estimate of what it will reasonably cost the student to attend a given institution for a given period of time.

Concurrent Enrollment – A high school student enrolled for one or more classes at a college or university in addition to high school courses.

Dually Enrolled - A student enrolled at two institutions at the same time. This may affect enrollment reports when both institutions count that student as enrolled.

EFC - Expected Family Contribution; in the context of financial aid, it is calculated by a federally-approved formula that accounts for income, assets, number of family members attending college, and other information.

FAFSA - Free Application for Federal Student Aid. This is a free service provided by the Federal government under the Department of Education and students are not charged to complete/file the FAFSA.

FAP – Financial Aid Plan (HESP specific)

FERPA - Family Educational Rights and Privacy Act, view federal website. The Family Educational Rights and Privacy Act (FERPA) (20 U.S.C. § 1232g; 34 CFR Part 99) is a Federal law that protects the privacy of student education records. The law applies to all schools that receive funds under an applicable program of the U.S. Department of Education.

FFS – Fee-For-Service Contracts; A portion of the College Opportunity Fund program in addition to COF stipends, this contract provides funding to certain higher education institutions to supplement high cost programs and purchase additional services (such as graduate programs).

Floor - In reference to the admission window, the floor is the minimum requirements for admission without requiring an exception of some kind. This usually coincides with the Index score.

FTE - Full-time Equivalent; a way to measure a student's academic enrollment activity at an educational institution. An FTE of 1.0 means that the student is equivalent to full-time enrollment, or 30 credit hours per academic year for an undergraduate student.

GEARUP - Gaining Early Awareness and Readiness for Undergraduate Programs; A Federal discretionary grant program designed to increase the number of low-income students who are prepared to enter and succeed in postsecondary education.

Guaranteed Transfer, GT Pathways - gtPATHWAYS applies to all Colorado public institutions of higher education, and there are more than 900 lower-division general education courses in 20 subject areas approved for guaranteed transfer. Courses are approved at least twice per academic and calendar year and apply the next semester immediately following their approval.

HB 1023 - In most cases, refers to HB 06S-1023, which declares "It is the public policy of the state of Colorado that all persons eighteen years of age or older shall provide proof that they are lawfully present in the United States prior to receipt of certain public benefits."

HB 1024 - In most cases, refers to HB 06-1024, which declares "On or before September 1, 2006, each governing board of a state institution of higher education shall submit to the Colorado commission on higher education and the education committees of the senate and the house of representatives, or any successor committees, a report regarding underserved students".

HB 1057 - In most cases, refers to HB 05-1057, which declares "a college preparation program operating within the school district that the college preparation program shall provide to the Colorado commission on higher education, on or before December 31 of each school year, a report specifying each student, by unique identifying number."

HEAR - Higher Education Admission Requirements, 2008-2010.

Index, Index Score - This index score is a quantitative evaluation that is part of a larger student application evaluation. The score is generated from academic achievement (GPA or High School Rank) and college placement tests (ACT or SAT). You can calculate your index score online. Index varies by institution depending on that institutions selection criteria.

IPEDS - Integrated Postsecondary Education Data System; Run by NCES, this system collects statistical data and information on postsecondary institutions. The Colorado Department of Higher Education submits aggregated data on public institutions to IPEDS.

Need - In the context of student financial aid, Need is calculated by the difference between the COA (Cost of Attendance) and the EFC (Expected Family Contribution)

NCATE - National Council for Accreditation of Teacher Education; NCATE is the profession's mechanism to help establish high quality teacher preparation.

NCLB - No Child Left Behind; The No Child Left Behind Act of 2001 (NCLB) reauthorized the Elementary and Secondary Education Act (ESEA) -- the main federal law affecting education from kindergarten through high school.

PSEO - Post Secondary Enrollment Option; A program that offers concurrent enrollment in college courses while in high school.

PWR - Postsecondary and Workforce Readiness; Definition was created during the SB08-212 CAP4K meetings.

QIS - Quality Indicator System; Implemented in HB96-1219, the specific quality indicators involved in QIS are similar to those used in the variety of quality indicator systems found in other states: graduation rates, freshmen retention and persistence rates, passing scores or rates on tests and licensure examinations, undergraduate class size, faculty teaching workload rates, and institutional support/administrative expenditures.

REP - Regional Education Provider; Colorado Statute authorizes Adams State College, Fort Lewis College, Mesa State College and Western State College to function as regional

educational providers and “have as their primary goal the assessment of regional educational needs...”
Regional education providers focus their attention on a certain geographical area.

SB 3 – In most cases refers to SB10-003, the Higher Education Flexibility Bill.

SB 212 - In most cases, refers to HB 08-212, the CAP4K legislation.

SBE - State Board of Education; As described on their website, "Members of the Colorado State Board of Education are charged by the Colorado Constitution with the general supervision of the public schools. They have numerous powers and duties specified in state law. Individuals are elected on a partisan basis to serve six-year terms without pay."

SFSF – State Fiscal Stabilization Fund; A component of the ARRA legislation and funding.

SURDS - Student Unit Record Data System

WICHE - Western Interstate Commission for Higher Education; A regional research and policy organization that assists students, policymakers, educators, and institutional, business and community leaders. WICHE states include: Alaska, Arizona, California, Colorado, Hawaii, Idaho, Montana, Nevada, New Mexico, North Dakota, Oregon, South Dakota, Utah, Washington, and Wyoming.

WUE - Western Undergraduate Exchange Program, managed by WICHE