



COLORADO

Department of
Higher Education

1600 Broadway, Suite 2200
Denver, CO 80202

Jared Polis
Governor

JB Holston
Executive Director

Meeting	CCHE Standing Committee on Student Success & Workforce Alignment Monday, November 2, 2026 1:00 - 3:00 p.m.
Location	Remote only
Zoom Information	Join Zoom Meeting Meeting ID: 873 6940 4303 Passcode: 311184
Meeting Participants	CCHE SS&AA Standing Committee
Meeting Objectives	Discuss student success and academic affairs topics in Colorado to advance practices and policies

A = in attendance, E = excused absence, N = not in attendance (Bolded Commissioners are official committee members)

ATTENDANCE							
Commissioners & Advisors							
Chair Berrick Abramson		Eric Tucker		Lisandra Gonzales		Sarah Hughes	
Nicole McWhirter		Aaron Harber		Jim Wilson		Ana Temu Otting	
Michael Lightner		Lena Crawley		Wayne Artis		Sen. Janice Marchman	
CDHE Staff							
Carl Einhaus		Spencer Ellis		Brad Griffith		Christina Carrillo	
Heather Delange		Beverly Jones		Sophia Laderman		Gillian McKnight-Tutein	
Peter Fritz		Sam Fogleman		Chealsye Bowley		Michael Vente	
Guests							





AGENDA

1:00 p.m.

Greetings and Introductions

Berrick Abramson, Committee Chair

1:05 p.m.

Approve notes for October 13 meeting

Berrick Abramson, Committee Chair

1:10 p.m.

Strategy discussion/[1330 recommendations](#)

- Transition Updates
Berrick Abramson, Committee Chair
 - Discussion: Cybersecurity Pathways from High School to College, Careers, and Service
Carl Einhaus, Chief Student Success & Academic Affairs Officer, CDHE
-

1:35 p.m.

Compelling discussion on informational items

- Recommended Approval of Open Education Resources (OER) Grant Program Year 9 Award Recipients
Chealsye Bowley, Director of Open Education and Learning Innovation
- Recommended Approval of New GT Pathways Courses
Christina Carrillo, Director of Transfer and Student Advocacy, CDHE
- CCHE Policy I, Part F: Admissions Standards Review Memo
Spencer Ellis, Senior Director of Student Success and P20 Alignment, CDHE





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- Recommended Approval of GT Pathways
Waiver Request for BS Medical Science for University of
Colorado Denver | Anschutz Medical Campus
*Brad Griffith, Senior Director of Academic Pathways and
Innovation, CDHE*

Next meeting date: Monday, November 30, 2026

ACTION ITEMS

Issue	Action / Next Step	Assigned To & Date Assigned





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Meeting	CCHE Standing Committee on Student Success & Workforce Alignment Tuesday, October 13, 2026 1:00 - 3:00 p.m.
Location	Remote only
Zoom Information	View Meeting Recording
Meeting Participants	CCHE SS&AA Standing Committee
Meeting Objectives	Discuss student success and academic affairs topics in Colorado to advance practices and policies

A = in attendance, E = excused absence, N = not in attendance (Bolded Commissioners are official committee members)

ATTENDANCE

Commissioners & Advisors

Chair Berrick Abramson	A	Eric Tucker	N	Lisandra Gonzales	A	Sarah Hughes	N
Danielle Ongart	N	Aaron Harber	A	Jim Wilson	A	Ana Temu Otting	N
Michael Lightner	N	Lena Crawley	N	Wayne Artis	A	Sen. Janice Marchman	N
Nicole McWhirter	A						

CDHE Staff

Carl Einhaus	A	Spencer Ellis	A	Brad Griffith		Christina Carrillo	A
Heather Delange	A	Beverly Jones	A	Sophia Laderman		Gillian McKnight-Tutein	
Peter Fritz		Sam Fogleman	A	Chealsye Bowley		Michael Vente	

Guests

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AGENDA –

NOTES

1:00 p.m.

Greetings and Introductions

Berrick Abramson, Committee Chair

1:05 p.m.

Approve notes for August 3 and August 31 meeting

Berrick Abramson, Committee Chair

The committee reviewed and considered approval of the minutes from two previous meetings that had not been approved due to a lack of quorum at a prior meeting. No corrections were proposed. Commissioner Harber moved to approve both sets of minutes. Commissioner McWhirter seconded the motion. The motion passed unanimously with no opposition. The minutes were approved as presented.

1:10 p.m.

Strategy discussion/1330 recommendations

- Transfer Subcommittee update

Berrick Abramson, Committee Chair

Commissioner Abramson provided an update on the ongoing work of the Transition Advisory Committee (TAC), noting that the committee is currently developing detailed recommendations related to governance structures, implementation timelines, agency relationships, and statewide talent development strategies. Commissioner Abramson anticipates providing more substantive updates once recommendations are finalized and reported later this fall. No action was required.

- CDE Partnership Special Recognition

*Carl Einhaus, Chief Student Success & Academic Affairs
Officer, CDHE*

Carl provided an update regarding the departure of a Colorado Department of Education (CDE) partner, Danielle Ongart.





Danielle led significant statewide data system and cross-agency initiatives. The Department highlighted its ongoing partnership with CDE and discussed transitional planning while CDE identifies a replacement for her. No action was required.

1:35 p.m.

Compelling discussion on informational items

- Annual Report from the General Education (GE) Council on GT Pathways

Brad Griffith, Senior Director of Academic Pathways and Innovation, CDHE

Christina Carrillo presented the Colorado General Education Council's annual review of the GT Pathways matrix and transfer data pursuant to Senate Bill (SB) 24-164. The report concluded that GT Pathways is functioning effectively overall but identified areas where credit-hour variations exist, particularly in world languages, mathematics, and laboratory sciences. Staff emphasized that the report contains recommendations and observations rather than requests for policy changes or Commission action.

Committee discussion focused on the need for measurable outcomes, timelines, baseline data, and evidence demonstrating the impact of credit-hour differences on students.

Commissioners expressed interest in understanding the scope of potential transfer issues before dedicating significant resources to additional alignment efforts. Staff noted that many concerns raised through the review process were based on institutional experience and anecdotal observations rather than statewide quantitative data.

Staff requested consideration of placing the annual report on the upcoming Commission consent agenda. Commissioner Harber moved to place the item on the consent agenda; however, no second was received. The motion failed for lack of a second. Committee members indicated a preference for the item to remain an action item for the October 22 Commission meeting





to allow for further discussion. Staff will return the item as an action agenda item and address questions raised regarding data, outcomes, and implementation timelines.

- Improving Statewide Transfer Update

Carl Einhaus, CDHE

Carl provided an update on ongoing implementation activities related to improving statewide transfer, including work resulting from both SB24-164 and the Office of the State Auditor's (OSA) Higher Education Transfer Credit Audit. Staff reported that proposed revisions to the GT Pathways and Prior Learning Assessment (PLA) policies will be presented to the Commission for action at its October 22 meeting. Staff also reported that all 19 audit recommendations assigned to the Department and Commission have been completed, including updates intended to improve transfer processes, transparency, and guidance related to military credit transfer.

Carl further updated the committee on the Department's rulemaking efforts related to transfer student complaints under SB24-164. Proposed rules establish a process for students to seek Department review of transfer-credit decisions after institutional complaint processes have been exhausted. Staff noted that extensive stakeholder engagement has occurred throughout the rulemaking process and that a public hearing is scheduled for November 3, 2026. The Department emphasized that the goal remains resolution of transfer issues at the institutional level whenever possible and that formal enforcement actions are expected to be infrequent.

- Degree Authorization Act

Heather DeLange, Director, Office of Private Postsecondary Education

- Approval of Renewal of Authorization for Relay Graduate School of Education





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Staff presented a request to renew degree authorization for Relay Graduate School of Education following successful reaccreditation through the Middle States Commission on Higher Education. Staff reported that the institution remains in compliance with Colorado's Degree Authorization Act and recommended renewal of authorization.

○ **Approval of Religious Training Institution:
Authorization for Ama Seminary**

Staff presented a request for authorization of AMA Seminary as a religious training institution under Colorado statute. Staff reviewed the statutory requirements applicable to religious training institutions and recommended approval.

Following discussion of both degree authorization items, Commissioner Aaron Harber moved to place the Relay Graduate School of Education authorization renewal and AMA Seminary authorization request on the Commission consent agenda. Commissioner Lisandra Gonzales seconded the motion. The motion passed unanimously with no opposition. Both items will advance to the October 22 Commission meeting on the consent agenda.

Next meeting date: Monday, November 2, 2026

ACTION ITEMS

Issue	Action / Next Step	Assigned To & Date Assigned



TOPIC: RECOMMENDED GRANTS FOR 2027 OER GRANT PROGRAM YEAR 9

**PREPARED BY: CHEALSYE BOWLEY, DIRECTOR OF OPEN EDUCATION AND LEARNING
INNOVATION, COLORADO DEPARTMENT OF HIGHER EDUCATION**

I. SUMMARY

This item recommends approval of grants identified through the comprehensive review process conducted by the Open Educational Resources (OER) Council and Department staff for the 2027 cohort 9 of the OER Grant Program.

II. BACKGROUND

The Open Educational Resources (OER) grant program is presently in its eighth year. OER are high-quality educational materials that are available at no-cost to students and have been released under an intellectual property license that permits free use and repurposing by others. The first seven years of the grant program saved students \$78.7 million dollars – an over 12 times return on investment. The 2026 request for applications was released in May 2026. For the cohort 9 grant cycle, there are four types of grants:

- **Zero textbook program advancement** up to \$25,000;
- **Collaborative** up to \$20,000;
- **General Incentive Fund** up to \$15,000; and
- **Individual Project** up to \$10,000

ZTC or Z-degrees are degrees that can be completed with zero textbook cost (ZTC). A program must convert enough courses to using OER or other free materials for students to realistically complete all credential requirements. This conversion process for a ZTC degree takes years as a minimum of 20 to 40 courses must be converted by a small group of instructors and staff. As of Fall 2026, there are a total of 70 zero textbook cost programs resulting from the OER grant

program: 17 certificates, 19 degrees that are complete, and 35 degrees that are in progress with identified plans for completion.

Applicant Pool:

Fourteen applications were received in September 2026 from public institutions of higher education with requests totaling \$211,088. Among the submitted proposals for this grant cycle, 43% (6) were from institutions for general incentive grants, 21.5% (3) were from institutions for zero textbook program advancement grants, 21.5% (3) were for individual grants, and 14% (2) were collaborative or partnership grants.

The OER Council and staff completed a two-month comprehensive review. OER Council members recused themselves from proposals associated with their home institutions and systems. As a result of the review, the OER council and staff are recommending funding 10 proposals – 4 general incentive grants to fund the adoption or creation of OER, 3 zero textbook cost degree program advancement grants, and 2 individual project, and 1 collaborative grant with a total funding amount of \$139,129.50.

The 14 proposals are collectively from both urban and rural public institutions of higher education. The recommended grants include ZTC associate, bachelor, and master degrees that are critical to our workforce in nursing, space studies, construction project management, hospitality, and social work. The performance period for award projects will run from January 1 to December 31, 2027.

III. STAFF ANALYSIS

The Colorado OER Community has demonstrated continued dedication to OER and ZTC initiatives through professional engagement and development of 70 zero textbook cost programs.

House Bill 26-1016 Continuation of Open Educational Resources Program appropriated \$113,502 for the OER grant program. Returned funds from cohort 7 grants that were completed in June 2026 were re-invested in the grant program (\$25,627.40) to provide the total funding of \$139,129.50. The maximum funding of grant categories were reduced to reflect the new appropriation. A notable change is previous institutional and collaborative z-degree categories in 2025 became zero textbook program advancement in 2026 with only current in progress zero textbook cost programs being eligible for the grant category. This change was made to prioritize completing existing in progress programs with limited funds. For example, the bachelor's of science in nursing at Western Colorado University will gain 74% completion toward being zero textbook cost and the School of Hospitality at Metropolitan State University of Denver will reach 90% completion toward zero textbook cost at the end of the performance period for the recommended cohort 9 grants.

Department staff provided pre-notifications of recommended proposals to applicants in October 2026. This afforded institutions an opportunity for planning with the understanding that final approval of their grant status would take place at the November 2026 CCHE meeting.

IV. STAFF RECOMMENDATIONS

Staff recommend approval of grants to advance OER and ZTC development in Colorado.

V. STATUTORY AUTHORITY

23-4.5-104. (3a) The council shall review the grant applications received and recommend to the commission applicants to which the commission may choose to award grants and the amount of each grant. Subject to available appropriations, the commission shall award grants through the grant program. The commission shall take into account, but is not bound by, the recommendations of the council.

ATTACHMENT(S):

Attachment A: Colorado OER Grant Program Recommended Award Recipients OER Grantees -
Year 9

Attachment B: Colorado OER Grant Review Rubric Year 9

Attachment A: Colorado OER Grant Program Recommended Award Recipients

OER Grantees - Year 9

Grant Type	Institution	Grant Title	C9 Award
1: Zero Textbook Cost Program Advancement	Arapahoe Community College	To Affordability and Beyond: Colorado Space Institute at ACC Z-Degree Curricula Development II	\$14,904.00
1: Zero Textbook Cost Program Advancement	Metropolitan State University of Denver	Open Roadrunners Y9 ZTC: Zero Textbook Cost Degrees	\$24,993.50
1: Zero Textbook Cost Program Advancement	Western Colorado University	Advancing Rural Health Outcomes with Open Nursing Resources	\$13,880.00
2: Collaborative	Community College of Denver, Colorado Northwestern Community College	Collaborative Development of Accessible, AI-Assisted OER Textbooks for MAT 1240 (Liberal Arts Mathematics) and MAT 1120 (Math for Clinical Calculations)	\$8,000.00
3: General Incentive Fund	Community College of Aurora	The Brave Choice Initiative: Accelerating Student Success through OER in High-Enrollment Career Pathways	\$14,760.00
3: General Incentive Fund	Metropolitan State University of Denver	Open Roadrunners Y9: OER training and incentives in 2027	\$14,793.00
3: General Incentive Fund	Morgan Community College	Faculty Stipends for OER Adoptions Across the Curriculum: 2027	\$14,826.00
3: General Incentive Fund	Pikes Peak State College	PPSC Broadening Reach with New OER Adoptions	\$14,973.00
4: Individual Project	Colorado Mesa University	Ethics in Action: A Practice-Based Guide for Early Childhood and Elementary Educators	\$8,000.00
4: Individual Project	Red Rocks Community College	RRCC Sustainable Open Educational Resources for Visual, Audio, and Media Arts,	\$10,000.00
		TOTAL	\$139,129.50

Attachment B: Colorado OER Grant Review Rubric - 2026

Selection Criteria	Expectations	Possible Points
a. Submission	Application uses the provided template and is submitted complete to OER@dhe.state.co.us . Application includes a project title, institution, contacts, project description, impact, institutional support, timeline, and budget.	Applications that do not meet this requirement will not be considered.
b. Project Description	Application includes a brief but detailed description that clearly describes the project, the course(s) involved, the institution, the target population for the materials, and the project team including relevant campus or project partners (such as the institutional research office, the library, or instructional technology) to support the proposed open educational resources initiative.	20 points
c. Impact on Student Success	Application describes how the project will impact student success, the learning experience of students enrolled in the courses, and/or DFW and retention rates.	10 points
d. Impact on Cost	Application describes replacing high textbook or material costs, and the evaluation plan includes how to evaluate the cost impact. If applicable, include estimated cost savings for proposed projects.	10 points
e. Impact on Enrollment	Application describes how the project will have high impact, such as use in: - core, GT Pathways, concurrent enrollment, high enrollment courses, - multiple courses, across institutions, and/or a zero textbook cost degree initiative.	10 points
f. Institutional Support	Application provides evidence of an OER committee at the institution, a complete list of the personnel who will be involved in the proposed project, names of committed instructors, and/or demonstrated support from departmental or institutional leadership. Letters of support may supplement the application to provide additional evidence.	5 points

g. Timeline	<p>Application MUST include:</p> <p>A) a realistic and detailed timeline for the project which may include milestones for selection of OER content, writing unique OER materials, implementation of OER content, and evaluation of the effectiveness of the project</p> <p>B) a description of the courses that will use OER and/or a process for selecting those courses; and</p> <p>C) plan for quarterly reporting and reimbursement that align with fiscal quarters</p>	15 points
h. Budget	Application includes a detailed project budget and that clearly identifies anticipated expenses and resources needed, including evidence of institutional or departmental support.	15 points
I. Budget Narrative	<p>Application includes a narrative that corresponds to line-item budget with justification for each expense.</p> <p>Applications that request personnel funding for roles that are not faculty or instructors should provide a job description, hourly wage, required fringe, number of hours per week, and number of weeks for the staff support.</p>	15 points
Total points		100 points

Topic: Recommended Approval of New Guaranteed Transfer (GT) Pathways Course

Prepared by: Brad Griffith, Senior Director of Academic Pathways and Innovation

I. Summary

Institutions have submitted proposals for the approval of new courses to be included in the statewide Guaranteed Transfer (GT) Pathways course matrix. These courses have been reviewed by faculty discipline groups and vetted for alignment with GT Pathways' content criteria and competencies. Approval of these courses will expand transfer options for students and support seamless progression toward degree completion across Colorado's public institutions of higher education. The recommended additions reflect Colorado's commitment to increasing curricular flexibility while maintaining rigor and statewide consistency.

II. Background

Created by law in 2001, GT Pathways is a set of general education courses that all students at Colorado public colleges must complete. The program ensures:

1. Students gain key competencies.
2. At least 31 credits are included.
3. Courses transfer across all public institutions in Colorado.

GT Pathways was designed to make transferring between schools easier and to protect earned credits. These courses give students a solid foundation toward their degree, no matter where they start.

In 2024, Senate Bill 24-164 strengthened transfer policies and directed the Colorado Commission on Higher Education (CCHE) to improve transparency and student success. Expanding GT Pathways is a key part of this effort.

The General Education (GE) Council advises CCHE and reviews proposed GT Pathways courses to ensure they meet statewide standards. Institutions submit detailed documentation, including sample syllabi, for review. After discussion, the GE Council recommends courses to the Commission for approval based on these voting rules:

- **Quorum:** At least 16 of 31 institutions must vote.
- **Approval:** At least two-thirds (66.7%) of votes must be in favor of a course to move forward to CCHE.

This process ensures consistency, quality, and transferability across Colorado’s higher education system.

III. Staff Analysis

The following courses have been recommended for approval by the General Education Council:

Institution	Course	Credits	GTP Category	Approval Rate
Colorado Community College System	PHI 2025 Ethics of Computing and Artificial Intelligence	3	GT-AH3 Ways of Thinking	96% (21/22)*

*Indicates no denials were received – only abstentions.

Feedback was overwhelmingly positive, with GE Council representatives generally finding that the course met GT Pathways competencies and learning outcomes.

IV. Staff Recommendations

Staff recommend that the Commission approve the new GT Pathways courses presented by the General Education Council for addition to the GT Pathways matrix and entry into the Colorado Transfer database.

V. Statutory Authority

C.R.S. § 23-1-108.5

Duties and powers of the commission with regard to common course numbering system – council of higher education representatives – rules – legislative declaration – definitions – repeal.

...

(4)(a) Each higher education institution shall submit its list of identified courses in the guaranteed transfer pathways matrix, including course descriptions and, upon request of the commission, summaries of course syllabi, for review and approval by the commission or before March 1, 2003, and on March 1 of each odd-numbered year thereafter.

(4)(b) Beginning with the fall semester of 2003, each higher education institution shall publish, and update as necessary, a list of course offerings that identifies courses offered by the institution that correspond with the courses included in the guaranteed transfer pathway matrix.

C.R.S. §23-1-125

Commission directive – student bill of rights – degree requirements – implementation of core courses – competency test – prior learning – prior work-related experience – policies – definitions – repeal.

(1) Student bill of rights. The general assembly finds that students enrolled in public institutions of higher education and students who are accepted to an institution of higher education have the following rights:

...

(d) Students have a right to know which courses are transferable among the state public two-year and four-year institutions of higher education;

...

(3) Core courses. The Department, in consultation with each Colorado public institution of higher education, is directed to outline a plan to implement a core course concept that defines the general education course guidelines for all public institutions of higher education....Any such guidelines developed by the Department shall be submitted to the commission for its approval....If a statewide matrix of core courses is adopted by the commission, the courses identified by the individual institutions as meeting the general education course guidelines shall be included in the matrix. The commission shall adopt such policies to ensure that institutions develop the most effective way to implement the transferability of core course credits.

Attachment(s):

Attachment A - CCCS GT Pathways Syllabus for PHI 2025



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Use this new form starting January 6, 2025

GT Pathways Curriculum

Course Submittal Form and Institutional Verification

Content Area: Arts & Humanities

Subcategory: **GT-AH3 - Ways of Thinking**

Date: 3/11/2026

Institution: Arapahoe Community College

Section I: Arts & Humanities (AHUM) Content Criteria - **GT-AH3**

The following required [AH3 content criteria](#) shall be either: 1) *copied and pasted verbatim* into each instructor's syllabus, OR 2) *mapped* to the institution's own content criteria in each instructor's syllabus:

Respond analytically and critically to ways of thinking, by addressing one or more of the following:

- a. Logic
- b. Ethics
- c. The different questions dealt with by leading philosophers and/or theologians and their positions on those questions





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Section II: Competencies & Student Learning Outcomes for **GT-AH3**

The following Student Learning Outcomes (SLOs) for the required GT-AH3 competency, Critical Thinking, shall be either: 1) *copied and pasted verbatim* into each instructor's syllabus, OR 2) *mapped* to the institution's own competencies and SLOs in each instructor's syllabus.

Critical Thinking:

1. Explain an Issue

- a. Use information to describe a problem or issue and/or articulate a question related to the topic.

2. Utilize Context

- a. Evaluate the relevance of context when presenting a position.
- b. Identify assumptions.
- c. Analyze one's own and others' assumptions.

5. Understand Implications and Make Conclusions

- a. Establish a conclusion that is tied to the range of information presented.
- b. Reflect on implications and consequences of stated conclusion.



Section III: GT-AH3 Courses to Include in GT Pathways Curriculum

Add additional rows as needed.

Course Prefix & Number	Course Title	Number of Credits	Effective Date
PHI 2025	Ethics of Computing and Artificial Intelligence	3	8/15/2026

Section IV: Institutional Process to Verify GT Pathways Compliance

Brief description of the on-campus process(es) used to ensure that, going forward, instructors are uniformly and consistently communicated to regarding the following expectations: (1) either copy and paste verbatim the required GT Pathways content criteria, competencies, and SLOs into their syllabi, or (2) map the required GT Pathways content criteria, competencies, and SLOs to the institution’s own content criteria, competencies, and SLOs. (Provide a link, add additional rows or attach a document, if necessary.):

Copy and paste verbatim the required GT Pathways content criteria, competencies, and SLOs into their syllabi

See attached syllabus.



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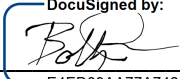
Section V: Institutional Verification

1. I verify that the courses listed above are part of our institution's general education core.
2. I verify that the courses listed above are offered at least once every two years (for CCCS, offered at a campus in the System).
3. I verify that course instructors are uniformly and consistently directed to include the required GT Pathways content criteria and competencies/Student Learning Outcomes, and that our institution will make a good faith effort to ensure faculty have the necessary resources to teach these content criteria and competencies.
4. I verify that instructors of these courses will be/have been directed to include the following statement in their course syllabi:

The Colorado Commission on Higher Education has approved [course prefix & number] for inclusion in the Guaranteed Transfer (GT) Pathways program in the [GT-AH3] category. For transferring students, successful completion with a minimum C- grade guarantees transfer and application of credit in this GT Pathways category. For more information on the GT Pathways program, please visit the [Colorado Department of Higher Education website](#).

Chief Academic Officer:

Printed Name - Bobby Pace

DocuSigned by:

Signature
E4ED89AA77A742C...

9/22/2026

Date

Arapahoe Community College
Ethical Challenges of Computing and Artificial Intelligence
PHI 2025
3 credits

Instructor Information

Instructor's Name

David Sackris

Instructor's Phone

303-797-5787

Instructor's Location/Office Hours

TBD

Instructor's email

David.sackris@arapahoe.edu

Course Start/End Dates

TBD

Course Meeting Times and Location

TBD

Course Description

This course presents the tools to critically evaluate and address ethics dilemmas in various domains of computing, Artificial Intelligence (AI), and data science. This course examines issues ranging from fundamental ethical theories to futuristic considerations in AI ethics.

Course Learning Outcomes

1. Identify and critically evaluate major ethical theories and principles.
2. Apply major ethical theories to ethical dilemmas.
3. Explain the fundamentals of how algorithms, AI, and machine learning work.
4. Identify the ethical challenges specific to AI.
5. Assess ethical considerations surrounding the collection and use of personal data.
6. Discuss methods for making algorithms fairer and more equitable.
7. Identify the implications of government surveillance and data collection for individual privacy
8. Analyze the societal impact of AI and automation.
9. Critique legal frameworks and policies that regulate data privacy and uses of AI.
10. Construct empirically informed philosophical analyses and arguments concerning AI technologies and their uses.

11. Develop philosophical reasoning skills that can be used to anticipate and evaluate novel technology.

Topical Outline:

1. Ethical theories and principles
3. Algorithms, AI, and machine learning
4. Ethical challenges specific to AI
5. Ethics and data privacy
6. Algorithmic bias and fairness
7. Surveillance and security
8. The future of computing and AI ethics

GT-AH3: WAYS OF THINKING CONTENT CRITERIA

Students should be able to:

Respond analytically and critically to ways of thinking, by addressing one or more of the following:

- a. Logic
- b. Ethics
- c. The different questions dealt with by leading philosophers and/or theologians and their positions on those questions

GT-AH3 COMPETENCY & STUDENT LEARNING OUTCOMES

Competency: Critical Thinking:

Students should be able to:

1. Explain an Issue

- a. Use information to describe a problem or issue and/or articulate a question related to the topic.

2. Utilize Context

- a. Evaluate the relevance of context when presenting a position.
- b. Identify assumptions.
- c. Analyze one's own and others' assumptions.

5. Understand Implications and Make Conclusions

- a. Establish a conclusion that is tied to the range of information presented.
- b. Reflect on implications and consequences of stated conclusion.

Textbook(s), Title, Author, Publisher, and ISBN Number

All readings will be provided through the course D2L site. There are no reading materials to purchase for this course.

Additional Materials

None required.

Computer or Technology Equipment Needed for the Course

In order to be successful in this course, it is required that you use Desire2Learn (D2L) and email. As you begin the course, you need to go to the sign-in page for D2L, <https://acc.desire2learn.com/> and click on "Browser Check" to be sure that your computer meets the requirements for our class. You need to have reliable access to the internet, and an activated student e-mail account (student.cccs.edu). If you do not have a computer with internet access at home or your computer is broken, you can use a computer at Arapahoe Community College or at a public library. It is your responsibility to have access to a working computer and a reliable internet connection. You will access all your assignments is through D2L. As a result, it is *necessary* that you have access to an adequate computer with internet service to do the work in this class.

Prerequisite(s) or Corequisite(s)

ENG090 and REA090 or CCR092/093/094 with a grade of "C" or better; or equivalent placement scores.

Census Date (date to drop with a refund):

TBD

If you drop a class before the drop date, you are not responsible for payment and will not lose College Opportunity Fund (COF) credits. Additionally, a dropped course will not be visible on your permanent student record. If you have financial aid, you should consult a financial aid advisor before dropping a class.

Withdraw Date (date to withdraw with a "W"):

TBD

You can withdraw between the drop and withdrawal dates without affecting your grade point average. However, if you withdraw from a course, you will be responsible for full payment and you will lose COF credits. If you have financial aid, you should consult a financial aid advisor before withdrawing from a course. If you decide to withdraw from a course for any reason, it is recommended that you speak to your advisor about your withdrawal options.

Methods of Evaluation:

Quizzes: 5%

Active Reading Assignments: 30%

Exams: 30%

Paper: 30%

Attendance: 5%

Active Reading Assignments:

The most important part of learning philosophy is actually reading what philosophers have to say and trying to figure out what they are saying. Only then can you determine what you should believe. Beyond just reading philosophy, it is important that you *actively* read a philosophy text. That is why associated with each reading is an ‘active reading assignment’. These will vary. Sometimes I will ask you respond to questions about a text, summarize an argument, identify the parts of an argument, bring in notes you took on the reading, or complete a short quiz on the reading at the beginning of class. The goal of these tasks is to help you understand and critically engage with the readings. Completing these tasks will help you with other assignment in this class: exams and essays. **There are 26 Active Reading Assignments. Late assignments will not be accepted and make-ups will not be offered; instead, each student’s lowest 8 scores will be dropped.** Active Reading Assignments will be graded on a five point scale (4 through 0). All active reading assignment instructions are located on D2L. Most assignments are turned in on D2L. Sometimes I will ask you to bring the assignment to class in some fashion. Make sure to follow the instructions for each assignment in order to receive full credit. Students are responsible for all assigned readings, even if they do not complete the associated Active Reading Assignment. Unit tests will cover all assigned readings, so it is in your interest to read all the assigned material, as well as to attempt to complete every active reading assignment, as this will help prepare you for the exams.

Quizzes:

There are 3 quizzes in this course. Two are short quizzes on the syllabus and argumentation. The third is on the principles of logic.

Exams:

There are 3 exams in this class. Each exam covers one course unit. The exams are non-cumulative. Before each exam, a study guide will be posted on D2L listing concepts from the course that the exam will cover.

Papers:

There is one paper assignment in this class that will be focused on regulation around the use and collection of personal data. Additional instructions will be posted at the appropriate time.

Make-up/Late Work Policies:

Late Active Reading Assignments will not be accepted and the assignments cannot be made up (that is why the dropped scores exist). For each 24 hour period past the deadline for a paper assignment, the paper may lose 5% points off the final grade. In order to make up an exam, the in-class logic quiz, or receive a paper extension, you should notify me of your absence ahead of time or provide a doctor’s note.

Attendance Policy:

Every student will receive two unexcused absences. That is, you may miss up to two classes with the absence having no effect on the attendance portion of your grade; nor do you need to contact me to inform me of your absence—unless you are going to miss a quiz or exam. It is your responsibility to keep up to date on any work you miss. Each additional absence beyond the two free passes will result in a 10 point deduction from your attendance grade. So every student starts with 100 attendance points. When you miss your third class, you will go down to a 90, your fourth absence will drop you down to an 80, etc.

Criteria for Grading/Grading Standards:

To earn an ‘A’, your final percentage must be between 90% and 100%. To earn a ‘B’ your grade must be between 89.99% and 80%. To earn a ‘C’ your grade must be between 79.99% and 70%, etc. Coursework and schedule of assignments Week 2 What is ethics?

Tentative Schedule of Class Assignments:

Assignments are due BEFORE class on the date indicated. E.g. Active Reading Assignment 1 should be submitted to the Active Reading Assignment 1 assignment folder before class begins on [date]. All readings will be found on D2L.

Week 1—Introduction to Reasoning and Argumentation

Section 1: Introduction to reasoning and argumentation

Read: *A Rule Book for Arguments* Introduction and chapter I

Do: Complete syllabus quiz; Active Reading Assignment 1

Class: Review Syllabus. What are philosophical questions?/Introduction to logic

Week 2—Elements of argumentation

Read: *A Rulebook for Arguments* Chapter II, III and VI

Do: Complete quiz on identifying arguments; Active Reading Assignment 2 and 3

Class: Differentiating arguments from non-arguments; identifying argument parts; Inductive and deductive arguments; validity and soundness; examining some basic argument forms; putting arguments in premise conclusion form

Week 3—Wrapping up argumentation/What is Data? What is Ethics?

Read: “The Challenge of Cultural Relativism”—Rachel; “Ethics & Big Data” Herschel and Miori

Do: Active Reading Assignment 4 and 5; logic quiz

Class: Relative and objective ethics; Introduction to big data

Week 4—Introduction to ethical theory

Read: ‘What is Ethics?’—Kate McShane; A Simplified account of Kant’s Ethics—Onora O’Neill; [J.S. Mill: “Higher and Lower Pleasures”](#); [Overview of Utilitarian theories](#);

Do: Active Reading Assignment 6 and 7

Class: Understanding the goals of ethical theory; digging deeper into deontology and utility; close reading and argument analysis

Week 5—Introduction to ethical theory/What is data science?

Read: [‘demandingness objection’](#); The [‘rights objection’](#); [Aristotle: The Virtues](#); [Aristotelian Virtue Ethics](#)

“Big data and their epistemological challenge”—Floridi; “The Data Deluge”, “Needle in a haystack” and “Clicking for Gold” from *The Economist* special report

Do: Active Reading Assignment 8 and 9

Class: Problems for utility, virtue ethics; and aiming to better understand big data

Week 6—Review and Exam 1

Read: Study Guide

Do: Active Reading Assignment 10

Class: Review and take exam 1

Week 7—Introduction to computing, algorithms and algorithmic bias

Read: “The Seven Secrets of Computer Power revealed”—Dennett; “Algorithms”—Dennett
“The ideal of objectivity”—Stemwedel; “Bias in Computer Systems”—Friedman and Nissenbaum (Pg. 330—336 only); Chapter 6 of AI ethics

Do: Active Reading Assignments 11 and 12

Class: What is an algorithm? How does a computer run an algorithm? Identify types of bias in analytics, sources of those biases, and how those biases could be ethical or unethical in cases

Week 8—Looking at cases of human decision making and automated decision-making, good and bad

Read: [Want Less-Biased Decisions? Use Algorithms](#)—Miller; Introduction and Chapter 1; Chapter 6-8; Chapter 21 of *Thinking, Fast and Slow*

Do: Active Reading Assignment 13 and 14

Class: What do we want in machine decision-making? Is machine decision-making superior to human decision-making? Can a machine make virtuous decisions?

Week 9—Looking at cases of algorithmic decision-making, good and bad

Read: The alignment problem ch. 2 Fairness; AI ethics chapter 8 “A-responsible machines and unexplainable decisions”; Some Moral and technical consequences of automation; A face-scanning algorithm increasingly decides whether you deserve the job--The Washington Post Olson, Parmy. 2020

Do: Active Reading Assignments 15 and 16

Class: When machines make decisions in place of humans, on what basis do we want them to do so and who is responsible for the decision?

Week 10—Review and Exam 2

Read: Study guide

Do: Active Reading Assignment 17

Class: Review and take exam 2

Week 11—Facial recognition and the need for explainable AI

Read: *The Alignment Problem* chapter 3 on transparency; <https://www.ibm.com/think/topics/explainable-ai>; We need transparency in algorithms but too much can backfire; “The ethics of facial recognition technologies, surveillance, and accountability in the age of artificial intelligence: a comparative analysis of US, EU and UK regulatory frameworks”

Do: Active Reading Assignment 18 and 19

Class: Explaining explainable AI

Week 12—Existing and proposed regulations around the use of data focusing on facial recognition

Read: Articles 13, 16, and 22 of the [GDPR](#); [The state of consumer privacy laws in the US](#); [Colorado Privacy Act](#): click on all the blue tabs in the sections entitled “Frequently asked

questions and general information”, “What consumers and entities should know,” and “How will the CPA be enforced?”

[Biometric Information Privacy Act of Illinois](#); [The case of Clearview AI](#) Algorithmic accountability act of 2023

Optional reading: [Canadian Personal Information Protection and Electronic Documents Act](#);

Do: Active Reading Assignment 20 and 21

Class: Discussion of paper assignment; beginning the drafting process

Week 13—Preparing for your paper

Read: Finding a source; sample student papers; paper rubric

Do: Active Reading Assignment 22 and 23

Class: Finding a peer reviewed source; reading and evaluating sample papers

Week 14—You, metadata, and privacy settings you can control now

Read: Peer Review; Angwin. J. 2020. “What They Know ... Now” The Markup <https://themarkup.org/blacklight/2020/09/22/what-they-know-now>
Twelve Million Phones, One Dataset, Zero Privacy. 2019 NY Times: <https://www.nytimes.com/interactive/2019/12/19/opinion/location-tracking-cell-phone.html>; [The right to privacy and the supreme court](#)

Do: Active Reading Assignment 24 and 25

Class: Peer review; What might they know? Should the right to privacy protect us from tracking?

Paper 1 due Friday by 9am

Week 15—Review and exam 3

Read: Study guide

Do: Active Reading Assignment 26

Class: Review for exam 3; take exam 3

Academic Integrity Statement:

Arapahoe Community College is committed to academic honesty and scholarly integrity. The College can best function and accomplish its mission in an atmosphere of the highest ethical

standards. All members of the College community are expected and encouraged to contribute to such an environment by observing all accepted principles of academic honesty. Academic dishonesty includes but is not limited to: plagiarism, cheating, fabrication, use of AI generated text without explicit permission, grade tampering, misuse of computers and other electronic technology, and facilitating academic dishonesty. Those found in violation of academic honesty may be subject to the following disciplinary actions: receiving a 0 on the assignment in question, and may also be subject to potential disciplinary sanctions under the Arapahoe Community College Code of Conduct.

Submission of your own work/academic integrity in relation to generated text (LLMs)

I encourage you to make use of our course materials and focus on turning in your own work, as doing your own work is how you learn the material. You are responsible for whatever material you turn in, wherever it comes from. I understand the temptation to use ChatGPT or other generative AI models to complete your assignments for you, but I encourage you to boldly engage in the act of writing and make yourself stronger in thinking, research, and writing itself. AI-Generated writing has several potential drawbacks that we should acknowledge including but not limited to:

- Source “hallucination”: Sometimes ChatGPT and other AI tools make up sources and/or combine multiple thoughts from multiple pages on a website, giving the wrong source citation material.
- Copyright implications and Ethical Use questions: The programming that feeds the ChatGPT language model can be problematic between its access to and use of previously copyrighted material (See: “[ChatGPT: what the law says about who owns the copyright of AI-generated content](#)”, *The Conversation* for details.)
- Intellectual property and the commodification of your work: As part of the Terms of Service, ChatGPT owns any of the data that is fed to it and uses that data to improve its models. Any submission of quiz, exam questions, discussion or essay prompts, etc., may violate the intellectual property rights of your instructors and your use of ChatGPT *without their permission* could constitute theft of their intellectual property.
- Inability to understand the nuances of language: Remember that sometimes infuriating “How to make a PB & J” assignment you got long ago in school? Sometimes language models struggle to understand language and directions. They also aren’t great with humor.
- Offensive ideas or material: Because ChatGPT does not *think*, but is a large language model, it does not necessarily have an ethical framework. Some researchers have asked it to adopt offensive personalities and in engaging with these personalities have encountered offensive ideas and material. (See: [Toxicity in Chat GPT](#), *Cornell*)
- Removal of human creativity in the writing process: Because ChatGPT is a language model, using it limits the conversation your writing enters into to conversations that have already been had, which is a bummer to the world who wants to hear what *you*, specifically, think about things.

ChatGPT is always changing – and will be here for the foreseeable future – so we need to learn to use it as support but not replacement for the real work of writing.

Submitting work as your own that is primarily/largely generated by AI without attribution will be considered academic dishonesty. **If you submit fabricated quotations (AI hallucinations) and/or use false citations as part of an assignment, wherever the material comes from, this is a form of plagiarism and the submission may receive a 0.**

Students are permitted to submit AI assisted writing (e.g., Grammarly, AI features built into word processing programs such as autocomplete). If you are confused about what is permissible in this course, please don't hesitate to contact me!

Accommodations Statement:

Arapahoe Community College provides accommodations to qualified students with Disabilities. To request accommodation, contact Disability Services located in M2710 or call 303-797-5937.

Safety Statement:

The safety and security of all our students, faculty, staff and visitors is of the utmost importance to the Campus Police Department. We rely on each of you to be an additional set of ears and eyes to help maintain campus safety. Please be diligent in your efforts to report suspicious or unusual behavior or circumstances to the Campus Police Department. Trust your instincts when something doesn't look, seem, or feel right and tell someone. The Campus Police can be reached at 303-797-5800 or in M2600 on the second floor behind Information Central. Additional safety information can be found on the ACC website under Student Resources, [Campus Safety](http://www.arapahoe.edu/student-resources/campus-safety) (<http://www.arapahoe.edu/student-resources/campus-safety>).

Discussion, Inclusiveness, and Student Behavior

This classroom is a safe space for learning and is an academic environment; you should expect to have your ideas, work, and arguments respectfully challenged. Our population made of a variety of students with a great diversity of beliefs, and the class must be respectful of all members.

Online Course Evaluations:

As this course nears completion, you will have the opportunity to complete a confidential evaluation of the class online. Login instructions will be sent to your 'student.cccs.edu' e-mail address. Your feedback is important, and ensures that ACC continues to offer quality instruction that meets your needs. Please take time to complete the survey – I appreciate your feedback.

E-mail Communication:

- Electronic correspondence from ACC employees will go to your student email account *only*. When you activate your account you can forward emails to an e-mail account that you already have if you wish to do so.
- To activate your student e-mail account, go to the [ACC Website](#), log into **myACC**.
- On top right hand corner, click on the Student Email icon (white envelope).
- A new window will pop up as Microsoft Outlook Web App.

- If you are a brand new student to the Colorado Community College System, your password is your birth date in this format MonthDDYear. For example, if you're birthday was July 4, 1976, then you would enter July041976.
 - Then in the two boxes below that, create a new password and retype a new password in the second box.
 - Then hit "Okay" and follow the prompts (select your language, time zone- "Mountain Time" is the 10th down from the very top, etc.) to complete your e-mail set-up.
- If you previously attended or applied to a Colorado Community College, your PASSWORD remained the same and your inbox should automatically connect.
- If you need technical support, please call the 24/7 toll-free technical support hotline at 1-888-800-9198.

Contact Information for Learning Support Services

Library

Room M2500, 303-797-5090.

<https://www.arapahoe.edu/campus-community/library-learning-commons>

ACC IT Help Desk

303-797-5700 x1283199

Littleton Campus - M1650

helpdesk@arapahoe.edu

<https://arapahoe.happyfox.com/home/>

24/7 Online Support:

888-800-9198

Academic Support center

(includes: writing support, math support, tutorial services, and peer mentoring),

Littleton Campus - M1650

303-797-5669

<https://www.arapahoe.edu/advising-support/tutoring/academic-support-center>

Advising

advising@arapahoe.edu

303-797-5664

Room M2010

Instructional Testing Center

Littleton Campus - M2280, 303-797-5993.

testingcenter@arapahoe.edu

<https://www.arapahoe.edu/advising-support/testing-center/instructional-testing>

Bookstore

Contact:

303.797.5676

accbookstore@arapahoe.edu

<https://www.arapahoe.edu/academics-programs/resources/bookstore>

Computer Labs

ACC has computer labs available at all campuses. The Open Computer Lab at Littleton is located on the first floor of the main building on the Littleton Campus in room M1650. The lab provides open access to both Windows and Mac computers with the latest software including Windows 10, MacOS, Microsoft Office solutions, Adobe Creative Cloud, and specialized software including AutoCAD and others needed to support the various academic programs on campus. Computer labs are also available at the Art & Design Center, Sturm Collaboration Campus at Castle Rock, and Parker Campus. A variety of platforms and software packages are available at these locations. <https://www.arapahoe.edu/campus-community/technology-acc>

Online Education support

303.797.5080 or

866.680.4222

Room M1710

<https://www.arapahoe.edu/advising-support/online-education-support>

PHI 2025: Ethics of Computing and Artificial Intelligence

Demonstrate that the course has been or, likely will be, offered at least once every two years (anywhere in the system).

This course will be immediately added to the ACC catalog and offered as soon as possible. It is part of a planned AI certificate program at ACC, as well as a planned AAS in Space Science Technology. If this course obtains GT status, it will be added to the philosophy DwD. There is significant interest in this course at colleges across the system: Both Front Range and Pueblo are interested in offering the course.

Provide evidence of transferability. Evidence should show that the course is taught at 4-year schools (including a list of those schools). If it is not taught at any 4-year school, other evidence must be considered, such as documented communications, and approval from 4-year schools (including a list of those schools) from a person with decision making authority. The Director of Academic Programs and Curriculum for the System will provide appropriate contacts and assist in compiling documentation.

This course is similar in nature to courses offered at most four-year colleges in Colorado:

CU Boulder offers a course entitled **PHIL 2160 (3) Ethics and Information Technology**

This course examines contemporary ethical issues concerning the use, misuse, and development of information technologies, with particular focus on the consequences such changes may have on the lives of individuals and on the shape of societies. Topics may include hacking and cyber crime; artificial intelligence; robotics and automation technologies, such as drones and self-driving cars; mass surveillance; use of personal information by corporate, law enforcement, and media interests; as well as gaming and virtual reality.

CSU offers a course entitled **PHIL 201 Ethical Computing Systems (GT-AH3)**

Also Offered As: [CS 201](#).

Course Description: Survey of contemporary ethical issues in information technology and software development. Explore moral, social, and legal issues with information technology in the modern world. Construct arguments based on modern ethical issues, and issues explored through science fiction.

CU Denver offers a course entitled **PHIL 3001 - The Ethics of Artificial Intelligence (AI) (3 Credits)**

Data-driven technologies like artificial intelligence (AI) are rapidly becoming central to our lives, shaping individuals and social institutions in both subtle and profound ways. Like any other new technology, AI has the potential to improve our lives, but also alter or diminish what we value. These are ethical stakes, worth serious attention. Careful analysis can help make sense of AI hype and identify how potential harms might be mitigated. This course gives students a tool kit to reason critically about some of the ethical and societal issues AI raises. The course has three main sections. Section I, "Personhood, Identity, Freedom, and Ethical Tools," familiarizes students with the tools of logical, philosophical inquiry; they will understand the importance of

such basic concepts as personhood, autonomy, agency, freedom, determinism, intelligence, information, and data. Most important, they will learn how such theories can apply to real world problems and new situations. Section II, “Technology, Artificial Intelligence, and Machine-Human Relationships,” offers some historical context about this present technological moment, investigating what we mean by terms like “technology” and “progress.” A primer on machine learning and AI offers additional context, and we investigate the significance to AI of calling AI “intelligent,” “autonomous,” or “agential.” The ethical dimensions of human-machine relationships are found out in this section. In Section III, “Contemporary Opportunities and Challenges with Artificial Intelligence,” theories and concepts introduced earlier help tackle pressing contemporary issues such as algorithmic bias, economic and social displacement, data privacy and surveillance, disinformation, manipulation and propaganda, and disruptions by AI in art/entertainment, warfare, medicine, and self-driving cars. Finally, the environmental sustainability of AI will be considered. Cross-listed with [PHIL 5001](#)

MSU offers a course entitled *PHI 3370 - Computers, Ethics, and Society*

Description: Does technology make society better? Students examine the good and bad things that result from the intersection of computers and society. They analyze how computer-based technologies might threaten societal values such as safety, knowledge, privacy, and freedom. Students learn how to apply ethical concepts to modern questions about how to best utilize technology.

In addition, this course has been explicitly endorsed for transfer by department heads at CU Bolder, UCCS, CU Denver, CSU, and the Colorado School of Mines. Several of these department heads also checked with colleagues in computer science, who also endorsed the course. See below for correspondence. In communication with department heads at MSU and UNC, no opposition was raised to this course counting as a guaranteed transfer course.

2/27/26

Dave, thanks for your patience. Our undergraduate curriculum committee took a look at the proposed course. We thought it looked great—no additional constructive feedback from our end on the course structure or content. Looks fantastic. We endorsed accepting this for transfer elective credit in PHIL for our department, and we also agreed to accept this course as both (i) satisfying the Values Area elective on the General Track of the PHIL major and (ii) counting as one of the track-specific “Group II” electives for the Values & Social Policy Track.

Let me know if there's anything else that would be helpful from my end. Not sure where you are in the approval process, but good luck. It looks like a valuable class, and I'm glad you're staking out some territory for the philosophy discipline in this topical area!

GZB [Garret Zantow Bredeson, head of undergraduate studies at CU Boulder]

Hi Dave (if I may),

Thanks so much for your email! Our department took a look at the course, and we'd be happy to support your efforts to make this a transfer course within the system, and to count it toward the Philosophy major at UCCS. Sounds good! Let us know if we can support or assist further. Cheers,

Jen

Jennifer Kling, PhD

she/her/hers ([what's this?](#))

Associate Professor of Philosophy

Chair, Philosophy Department

Director, Center for Legal Studies

Co-Director, Center for Research Frontiers in the Digital Humanities

University of Colorado, Colorado Springs

President (2024-2025), Concerned Philosophers for Peace

Co-Editor, [Feminist Philosophy Quarterly](#)

Co-Host, [Hotel Bar Sessions](#) podcast

jkling@uccs.edu

David,

Thanks for sending this our way. We are happy to support this proposal. We've checked with our partners in computer science (PHIL201 is cross listed with CS201), and they are willing to support it as well.

Let me know if I can help in any way.

Best,

Ken

[Kenneth Shockley](#) (he/him/his)

Professor and Chair, [Department of Philosophy](#)

Holmes Rolston III Endowed Chair in Environmental Ethics and Philosophy

[Colorado State University](#)

EXTERNAL MAIL: SARAH.K.TYSON@ucdenver.edu: Do not click links or open attachments unless you recognize the sender and know the content is safe. Please contact your college IT Help Desk if you have any questions

Hi David,

Thanks for reaching out about this class. It sounds great to us. We are currently developing an upper level course in AI Ethics. So, this would be a nice sequence a transfer student could do.

I'm cc'ing our incoming chair, Gabriel Zamosc, who will be running things starting August 1.

Best,

Sarah

Hi Dave,

Sorry for the radio silence over here—my recovery from surgery has taken a lot longer than I anticipated.

But I'm here now!

I think the class looks great, including IV. I think we could transfer it in as a midlevel humanities course, assuming that the course number starts with a 2. It's a weird criterion, but there we are. (It's a long story that I can share via zoom if you like.)

The course number looks to start with a 1, if I'm reading things correctly. If that's the case, the class would come in as a free elective, which might not be awesome. Is there any way to change the number to a 2 [this is a change we made]? That would help students who transfer to Mines.

Happy to chat/email.

Best,

Sandy Woodson (she/her)

Department Head & Teaching Professor

Humanities, Arts, & Social Sciences

Colorado School of Mines

Golden, CO

303.384.2335

Policy Concept Memo

Admissions Standards Policy

- Policy Section: Section I Part F
 - Policy Name: ADMISSIONS STANDARDS POLICY
 - Lead Staff: S. Ellis
 - Committee Assignment: SSWA
 - Date Presented to Standing Committee: November 2, 2026
-

1. Problem Statement

- **What issue or gap is this policy review addressing?**
 - This policy review is a product of CDHE's policy setting committee (and subcommittee) which was formed and is intended to align with the recommendations the Department received from the consultants at KPMG. This policy was identified for routine updates.
- **Why is review needed now? (e.g., outdated language, audit finding, implementation challenges, misalignment)**
 - The Commission identified this policy to be reviewed in the coming months during their May 2026 meeting when they discussed the CCHE Policy Review and Charter with Staff. The review is needed now to remain aligned with the identified timeline for the CCHE's comprehensive policy review. Additionally, policy recommends that "the Commission review the policy every three years or as required to determine any appropriate revisions."
- **What risks exist if no action is taken?**
 - Risks presented if this policy is not reviewed during the CCHE's comprehensive policy review include this policy not being routinely

updated in accordance with the CCHE's policy charter and the policy not being updated in alongside all other CCHE policies.

2. Statutory Drivers

- **Relevant statute (C.R.S. citations)**
 - The relevant statute for this CCHE policy is found in Colorado Revised Statute 23-1-113 (1)(a); 23-1-113.5 (1); 23-1-113.5 (2)(a).¹
- **Summary of statutory requirements or constraints**
 - **23-1-113 (1)(a):** directs the Colorado Commission on Higher Education (CCHE) to set statewide academic admission standards for first-time freshmen and transfer students at Colorado's state-supported four-year and graduate institutions and requires institutional governing boards to implement those standards. It also requires that admission standards for out-of-state students be at least as rigorous as those for Colorado resident students.
 - **23-1-113.5 (1):** directs the Colorado Commission on Higher Education to maintain minimum percentages of Colorado resident students in both freshman admissions and overall enrollment at Colorado's state-supported institutions ("not less than fifty-five percent of the incoming freshman class at each state-supported institution of higher education are in-state students").
 - **23-1-113.5 (2)(a):** extends the special resident enrollment requirement that applies to Colorado School of Mines to Western Colorado University. Under subsection (1), Mines is required to maintain at least 60% resident enrollment (rather than the standard two-thirds requirement that applies to most public institutions), and subsection (2)(a) applies that same 60% standard to Western Colorado University.
- **Any recent legislative changes impacting this policy**
 - Recent legislative changes impacting the Admissions policy included:
 - **State Level**
 - Directly: Test Optional (HB21-1067, HB20-1407),
 - Indirectly: Changes to Institutions of Higher Education Statutes (SB26-078) which includes changes to the Data Advisor Group and institutional reporting, Funding Allocation Model Changes (HB26-1345),
 - **Federal Level**
 - Directly: U.S. Supreme Court Decision Ending Affirmative Action and raced based admissions (2023) - although race

¹ Source: Section 23-1-113 – Commission directive - admission standards for baccalaureate and graduate institutions of higher education - policy - report - definitions, <https://leg.colorado.gov/sites/default/files/images/olls/crs2024-title-23.pdf> (accessed May 26, 2025).

based admissions is not part of the admissions policy, it is a factor to be aware of in this process.

- Indirectly: FAFSA Rollout and Changes (2024-2026)
-

3. Strategic Plan Alignment

- Which CCHE strategic priority(ies) does this policy support?
 - In general, the Admissions policy supports the strategic goal *“Increase the number of Coloradans benefiting from valuable career skills, obtained while in high school or via postsecondary education, that -at a minimum- enable additional lifetime earnings greater than the cost of attendance.”* More specifically, the policy supports “serving more learners with relevance and value”, though Admissions and the Admissions policy are not directly mentioned in strategic plan materials.
 - How does this policy advance Commission goals?
 - The Admissions policy advances the Commission goals of closing attainment equity gaps, increasing postsecondary enrollment, and success of high school graduates.
-

4. Student Outcomes Impacted

- Which student outcomes are affected? (access, success, affordability, completion, workforce alignment, etc.)
 - Access
 - Success
 - Workforce alignment
 - Brief explanation of expected impact (positive/negative, direct/indirect)
 - Updating this policy is expected to have a positive impact in terms of aligning with the comprehensive policy review of the CCHE and ensuring this policy has routine updates for clarity and accuracy.
-

5. Current Policy Snapshot

- High-level summary of current policy intent
 - The current Admissions policy’s intent is to align with the statutory authority of the CCHE as established by Colorado Revised Statute 23-1-113, which authorizes the CCHE to establish academic admissions standards for first-time and transfer students at all state-supported baccalaureate and graduate institutions of higher education in the state.
- Key provisions or requirements

- As reported in section three of the policy, the policy also maintains several goals
 - 1. Informing prospective students regarding the recommended ways to academically prepare for postsecondary education in Colorado. 2. Requiring that four-year institutions admit only students who are academically prepared, as defined in Colorado's remedial education policy, unless that institution can adequately support the student with Supplemental Academic Instruction. 3. Requiring institutions to establish and clearly communicate to prospective students and affiliated constituents performance-based admissions standards that reflect the institution's statutory role and mission and which align to the following: a. Colorado Department of Education's high school graduation guidelines (Colorado Academic Standards) per C.R.S. 23-1-113(1.5); b. Commission Policy I, L: Statewide Transfer and gtPathways Policy; c. Colorado Remedial Education Policy; and d. Appropriate alternative pathways. 4. Encouraging diversity by encouraging the admissions of applicants from underrepresented groups, applicants with special talents and applicants with other unique circumstances while ensuring their ability to succeed. 5. Allowing institutional flexibility in making admissions decisions that will lead to each institution meeting its enrollment, persistence and completion rates and the state meeting its statewide goals.
 - It maintains these admission standards:
 - High school grade point average; and
 - Rigor (which can include many factors including satisfying the Higher Education Admission Recommendations:
 - Academic Area English - 4 Units, Mathematics - 4 Units, Natural Science - 3 Units, Social Science - 3 Units, World Language - 1 Unit, and Academic Electives - 2 Units (total of 17 Units).
 - Assessment scores (i.e. SAT and ACT) are optional.
 - Additionally, the spirit of the policy has moved away from inputs (i.e. strict admission guidelines) and toward outputs (i.e. student success such as services, retention and completion).
 - **Known challenges, ambiguities, or inconsistencies**
 - The policy is slated for routine updates, including high level review from subject matter experts, stakeholder groups, and staff. Known challenges include factual updates to language and statutory references, as well as consistency in structure and formatting in alignment with all CCHE policies.
-

6. Key Issues for Consideration

- Are the policy's goals, definitions, and references sufficiently clear and consistent with related CCHE policies?
 - Are there any areas where existing policy language may create ambiguity regarding academic preparedness, institutional discretion, or support for student success that should be clarified during this review?
-

7. Preliminary Options / Directional Framing

- Option A: (minimal update)
 - This policy has been identified for this type of review by the CCHE and its staff.
-

8. Recommended Scope of Revision

Indicate proposed track and rationale:

- **X Routine Update** (technical, clarifying, non-substantive)

Rationale: This policy has been identified for this type of review by the CCHE and its staff during preliminary review of all CCHE policies.

9. Stakeholder Landscape

- Key advisory groups engaged or planned
 - Staff have started conversations with Admissions directors and leaders at Colorado IHEs through the Admissions Council. The Admissions Council is a voluntary body of admissions officers and leaders in Colorado comprising public and private IHE experts. Staff will also engage with stakeholder groups (both formal and informal) by sharing drafted policy updated and survey information to solicit input.
 - Institutional roles (CEOs, registrars, faculty, etc.)
 - Discipline groups include experts in Admissions, Registrar, Chief Academics, General Education Council, students, and eventually CEOs of IHEs.
 - External partners (if applicable)
 - Additionally, public feedback will be solicited as prescribed by the CDHE staff guidance information (public feedback survey, etc.).
-

10. National Context / Best Practice (Preliminary)

- Is this policy common nationally?
 - Yes, most states maintain an admissions standard through either their state statute, coordinating board policy (like CCHE), or through a university system or governing board policy for public institutions of higher education.
 - Where does Colorado align or differ?
 - Colorado aligns with policy in that there are statewide guidelines and/or a framework for admissions practices in many other states or university systems. Similarly, individual institutions maintain discretion for their admissions processes in Colorado as in many other states.
 - Any notable models or emerging practices
 - There appear to be three predominant models: state coordinating board policies (like CCHE), university system admissions standards, and finally primarily individual standards driven by IHEs. These different models may dictate varying approaches for different states, student populations, and environments. Current trends are related to those larger trends in postsecondary education, for example ensuring multiple pathways, more holistic (beyond test and GPA) considerations, alignment with K12 and workforce as well as outcomes. Additionally, some states have adopted statewide direct or guaranteed admission practice. Many of our public institutions have created their own direct/guaranteed admission practices with specific school districts. This is an ongoing conversation with our institutions and will continue to be. We currently are not seeking to incorporate such a practice into our admission policy, but it could be a future consideration.
-

11. Key Questions for Commission Direction

- Question 1: What additional questions does the CCHE have for Admissions experts and practitioners in Colorado?
 - Question 2: What recommendations does the CCHE have for IHEs in their admissions practices?
 - Question 3: How can staff support the successful drafting and implementation of these revisions?
-

12. Proposed Next Steps

- Stakeholder engagement plan
 - In anticipation of the accelerated timeline, staff have already invited conversation with Colorado Admissions Council in August and September.

- Staff will also continue to follow the prescribed stakeholder input plan as outlined in the guidance provided by leadership.
- Timing for Concept Validation (Step 2)
 - This memo and current progress will be shared with CCHE SSWA standing committee during the November 2, 2026, meeting. The timeline is such that all recommended changes are intended to be approved by February of 2027.
 - Anticipated return to Committee
 - Staff intend to return to CCHE SSWA standing committee during the January 2027 meeting to share progress on stakeholder engagement and drafting. The final item for CCHE is planned to be shared at the February 2027 CCHE meeting.

**Topic: Guaranteed Transfer (GT) Pathways Waiver Request for Bachelor of Science (B.S.) in
Medical Science**

Prepared by: Brad Griffith, Senior Director of Academic Pathways and Innovation

I. Summary

This item recommends Commission action to approve a GT Pathways waiver request for the **Bachelor of Science in Medical Science** offered by the University of Colorado Denver | Anschutz Medical Campus. The B.S. in Medical Science is an embedded degree-completion pathway available only to students enrolled in the Doctor of Pharmacy (PharmD) program who have not previously earned a bachelor's degree. The institution requests a full GT Pathways waiver because the program functions as a professional degree-completion pathway rather than a traditional transfer-oriented liberal arts and sciences bachelor's degree. Students complete substantial prerequisite general education coursework prior to admission and must complete the first two years of the PharmD curriculum to earn the degree. Department staff and the General Education Council reviewed the request and found that the program continues to ensure competency in reading, critical thinking, written communication, mathematics, and technology while supporting professional pharmacy education requirements. The Commission is asked to consider approval of the waiver request.

II. Background

Institutions of higher education (IHEs) are required by CCHE Policy I, Part L (Statewide Transfer and GT Pathways) to seek a waiver from GT Pathways curriculum requirements when their baccalaureate degree programs do not meet the full curriculum requirements. Commission approval is required for such a waiver per §23-1-125(3), Colorado Revised Statutes (C.R.S.),

which states “in creating and adopting the [core curriculum] guidelines, the department and the commission, in collaboration with the public institutions of higher education, may make allowances for baccalaureate programs that have additional degree requirements recognized by the commission.” Additionally, per CCHE Policy I, Part V (Creation, Modification, or Discontinuance of Academic and Vocational Programs at Public Institutions of Higher Education), Section 4.02.03 states, “if the Department determines that the [academic program] proposal is not consistent with...GT Pathways requirements (if applicable), it will so inform the governing board. The Department shall take credit cap and GT Pathways (where applicable) waiver requests to the Commission for action”.

At its May 2019 meeting, the Commission approved revisions to CCHE Policy I, Part L (Statewide Transfer and GT Pathways), which codified a process for institutions seeking a GT Pathways waiver for an individual degree program and criteria for the Commission to use in determining whether to grant a full/blanket waiver, a modified/limited waiver, or no waiver. The process includes six questions that an institution must address to aid Department staff in making a recommendation to the Commission for action:

1. Why it is important that a [GT] Pathways waiver be granted for this program (address the nature of the degree relative to the profession, if applicable, including work pathways for students entering the program)?
2. Which specific components of the [GT] Pathways curriculum are requested to be waived or modified?
3. How will the institution ensure that the program includes a “core of courses” that provide a general education through which “students demonstrate competency in reading, critical thinking, written communications, mathematics, and technology”, as articulated in Colorado Revised Statutes 23-1-125(3)? How will the general education provided respond to the 10 competencies of the [GT] Pathways curriculum?

4. What additional degree requirements, such as those associated with accreditation and licensure, make it impossible to include the full [GT] Pathways in the program curriculum?
5. How will the absence of a [GT] Pathways waiver potentially harm students (if, for example, it extends the time to degree beyond four years, or results in certain critical courses being left out of a program)?
6. How will the institution ensure that the [GT] Pathways waiver will not create barriers to student transfer?

III. Staff Analysis

The Guaranteed Transfer (GT) Pathways curriculum was created to establish a statewide transferable general education core and ensure competency in reading, critical thinking, written communication, mathematics, and technology. While GT Pathways generally applies to all baccalaureate programs, statute and Commission policy allow waivers for programs with additional degree requirements recognized by the Commission.

The University of Colorado Denver - Anschutz Medical Campus requests a full GT Pathways waiver for its B.S. in Medical Science. Unlike a traditional bachelor's degree program, students do not apply directly to or transfer into the degree. Instead, the degree serves as an optional credential for PharmD students who have not previously earned a bachelor's degree. The institution indicates that the degree was created to address situations in which PharmD graduates were unable to pursue advanced educational opportunities because they lacked a bachelor's credential despite completing substantial undergraduate and professional coursework.

The institution notes that all students must complete significant pre-professional coursework before admission, including biology, chemistry, organic chemistry, biochemistry, microbiology,

human physiology, calculus, English composition, and humanities/social sciences coursework. Students must also complete at least 30 credits of general education coursework and the first two years of the PharmD curriculum. The institution provided documentation demonstrating how the curriculum addresses the ten GT Pathways competency areas through prerequisite and professional pharmacy coursework.

The institution further states that accreditation and professional education requirements make inclusion of the full GT Pathways curriculum impractical. The PharmD program requires at least 300 clock hours of Introductory Pharmacy Practice Experiences (IPPEs) during the first three years of the curriculum, limiting additional flexibility within the degree structure. Requiring the full GT Pathways curriculum could extend time to degree, increase costs, and create additional financial burdens for students participating in the PharmD program.

The institution does not anticipate transfer concerns because students complete general education requirements prior to entry into the PharmD program, PharmD programs generally do not accept transfer credit, and students are unlikely to transfer into another undergraduate program after beginning the professional curriculum.

The General Education Council voted on the waiver request and expressed support for advancing the proposal to the Commission.

Proposal	Accept	Reject	Abstain
B.S. in Medical Science, University of Colorado Anschutz Medical Campus	82% (18/22)	9% (2/22)	9% (2/22)

Voting results reflect 18 accept votes, 2 reject votes, and 2 abstentions. No substantive comments specific to this waiver request were submitted through the voting form. Department staff find that the proposed waiver is consistent with statutory authority allowing accommodations for baccalaureate programs with additional degree requirements recognized by the Commission. The B.S. in Medical Science maintains a strong general education

foundation through prerequisite coursework and professional pharmacy curriculum requirements while serving a unique degree-completion purpose for PharmD students.

IV. Staff Recommendations

Staff recommend that the Commission approve the GT Pathways waiver request for the Bachelor of Science in Medical Science offered by the University of Colorado Denver - Anschutz Medical Campus.

V. Statutory Authority

C.R.S. § 23-1-125

Commission directive - student bill of rights - degree requirements - implementation of core courses - competency test - prior learning - prior work-related experience - policies - definitions - repeal.

...

(3) Core courses. The department, in consultation with each Colorado public institution of higher education, is directed to outline a plan to implement a core course concept that defines the general education course guidelines for all public institutions of higher education. The core of courses shall be designed to ensure that students demonstrate competency in reading, critical thinking, written communication, mathematics, and technology. The core of courses shall consist of at least thirty credit hours but shall not exceed forty credit hours. Individual institutions of higher education shall conform their own core course requirements with the guidelines developed by the department and shall identify the specific courses that meet the general education course guidelines. Any such guidelines developed by the department shall be submitted to the commission for its approval. In creating and adopting the guidelines, the department and the commission, in collaboration with the public institutions of higher education, may make allowances for baccalaureate programs that have additional degree

requirements recognized by the commission. If a statewide matrix of core courses is adopted by the commission, the courses identified by the individual institutions as meeting the general education course guidelines shall be included in the matrix. The commission shall adopt such policies to ensure that institutions develop the most effective way to implement the transferability of core course credits.

Attachment(s):

Attachment A - GT Pathways Waiver Request for BSMS CU Anschutz



COLORADO

Department of
Higher Education

Guaranteed Transfer (GT) Pathways Waiver Request

Institution Submission Form

Background: This form is used by institutions to request a waiver from the Guaranteed Transfer (GT) Pathways curriculum requirements for a baccalaureate degree program, in accordance with CCHE policy and statute.

Certain **technical Bachelor of Applied Science (BAS) degrees with no liberal arts and sciences equivalent** may qualify for an **automatic GT Pathways waiver** and are therefore subject to **reduced documentation requirements**.

Section 1: Institutional Information

- **Institution Name:** University of Colorado Denver | Anschutz Medical Campus
- **Department/Program Submitting Request:** Office of the Registrar
- **Point of Contact (Name & Title):** Allison Diekhoff, University Registrar
- **Email Address:** allison.diekhoff@cuanschutz.edu

Section 2: Degree Program Information

For current and new programs:

- **Degree Name (e.g., B.S. in Nursing):** B.S. in Medical Science
- **CIP Code:** 26.0102
- **Requested Total Credits:** 120
- **New or Existing Program:**
 - ☐ New Program
 - ☒ Existing Program

If updating a current program:

- **Effective Term of Change, if current program:** Fall 2025



Section 3: GT Pathways Waiver Type (Required)

Select one waiver pathway below. The remainder of this form will differ based on your selection.

☐ A. Technical BAS - Automatic GT Pathways Waiver

(Reduced documentation required)

This option applies **only** if the program meets all of the following conditions:

- The degree is a **Bachelor of Applied Science (BAS)**
- The program is **technical and workforce-focused**
- There is **no liberal arts and sciences baccalaureate equivalent** offered by the institution or statewide

→ If you select **Option A**, complete **Sections 4A, 5, 6, and 7** only.

☒ B. Non-Technical BAS or Other Baccalaureate Program

(Full review required)

This option applies if the program:

- Includes a liberal arts and sciences foundation **or**
- Has a comparable BA/BS or other LAS-oriented baccalaureate degree **or**
- Is not a BAS degree

→ If you select **Option B**, complete **Sections 4B-7**.

Section 4A: Eligibility Attestation

(Technical BAS - Automatic Waiver Only)

By submitting this request, the institution attests that:

1. The BAS program is **technical in nature and workforce-aligned**
2. The curriculum is **not designed to be a transfer-oriented liberal arts and sciences degree**
3. No **GT Pathways-aligned liberal arts and sciences equivalent degree** exists at the institution or within Colorado

Brief Program Description (1-2 paragraphs):

(Focus on technical competencies, applied learning, and workforce alignment)

Click or tap here to enter text.

Section 4B: GT Pathways Waiver Justification

(All Non-Technical Programs)

Provide a concise narrative addressing the following:

- 1. Why it is important that a GT Pathways waiver be granted for this program (address the nature of the degree relative to the profession, if applicable, including work pathways for students entering the program)?**

We are requesting a GT Pathways waiver for the B.S. in Medical Science because it differs fundamentally from a traditional bachelor's degree program. Students do not apply to or transfer into/out of this program. Instead, it is an optional degree-completion pathway embedded within the Doctor of Pharmacy (PharmD) program.

A bachelor's degree is not required for admission to the PharmD program. The B.S. in Medical Science is only available to PharmD students who have not previously earned a bachelor's degree.

The degree addresses a documented problem in which some PharmD graduates were unable to pursue advanced medical education because they lacked a bachelor's degree.

The integrated B.S. in Medical Science provides students with an additional credential that supports access to advanced educational opportunities and enhances employability while minimizing both cost and time to degree.

- 2. Which specific components of the GT Pathways curriculum are requested to be waived or modified?**

We are requesting a full waiver. While the B.S. in Medical Science deviates slightly from a B.A.S. degree and therefore does not automatically qualify for a GT Pathways waiver, the degree functions similarly to an applied or professional degree rather than a traditional liberal arts bachelor's degree.

- 1) It is not designed to be a transfer-oriented liberal arts and sciences degree. It is an embedded degree completion pathway for students who have intentionally entered the professional PharmD program.
- 2) No equivalent GT Pathways-aligned Medical Science degree exists in Colorado.
- 3) General education requirements are completed before admission.

- 3. How will the institution ensure that the program includes a “core of courses” that provide a general education through which “students demonstrate competency in reading, critical thinking, written communications, mathematics, and technology”, as articulated in Colorado Revised Statutes 23-1-125(3)? How will the general education provided respond to the 10 competencies of the GT Pathways curriculum?**

Students must complete:

- 47 credits of PharmD prerequisite coursework, including biology, chemistry, biochemistry, microbiology, physiology, calculus, English composition, and humanities/social sciences.
- At least 30 credits of general education coursework in reading, critical thinking, communication, mathematics, and technology from an accredited institution, *which may overlap with the PharmD prerequisite coursework*.
- At least the first 2 years of professional PharmD coursework.

The combination of this curriculum responds to each of the 10 competencies of the GT Pathways curriculum.

In addition to meeting the state's core curriculum requirements, GT Pathways competencies are also represented within the first two years of the PharmD curriculum:

GT Pathways Competencies	Description	Course Subject/Number Examples	Sample Course Description
Critical Thinking	Competency in critical thinking addresses a student's ability to analyze information and ideas from multiple perspectives and articulate an argument or an opinion or a conclusion on their analysis.	PHRD 5075 Self-Care and Nonprescription Medications	Course prepares students to be able to 1) collect appropriate patient data to make an assessment for self-care (e.g. nonprescription products), 2) conduct a patient-centered assessment, and 3) design, implement, evaluate and adjust a patient-centered self-care plan.
Oral/Presentational Communication	Competency in oral communication represents a student's ability to deliver a well-prepared and purposeful presentation grounded in credible information and organized effectively.	PHRD 6065 Evidence-based Medicine & Literature Evaluation	An introduction and step-wise approach to evidence-based medicine. Students understand commonly-used statistical tests and evaluate statistical results for statistical versus clinical significance. Students demonstrate by answering short drug information questions, presenting a journal club and writing a drug information paper.
Quantitative Literacy	Competency in quantitative literacy represents a student's ability to use quantifiable information and mathematical analysis to make connections and draw conclusions. Students with strong quantitative literacy skills understand and can create sophisticated arguments supported by quantitative evidence and can clearly communicate those arguments in a variety of formats (using words, tables, graphs,	PHRD 6065 Evidence-based Medicine & Literature Evaluation	An introduction and step-wise approach to evidence-based medicine. Students understand commonly-used statistical tests and evaluate statistical results for statistical versus clinical significance. Students demonstrate by answering short drug information questions, presenting a journal club and writing a drug information paper.

	mathematical equations, etc.).		
Information Literacy	<p>Information literacy refers to the set of skills needed to find, retrieve, analyze, and use information.</p> <p>Competency in information literacy represents a student's ability to know when there is a need for information, to be able to identify, locate, evaluate, and effectively and responsibly use that information for the task or problem at hand.</p>	<p>PHRD 5010 Introductory Pharmacy Practice Experience (IPPE) Community</p>	<p>Case-based learning courses, community and patient-care laboratory experiences using pharmacy information systems and drug databases, and independent study experiences integrated within the curriculum</p>
Diversity and Global Learning	<p>Competency in diversity and global learning refers to a student's ability to critically analyze and engage complex, interdependent structures and constructs (such as natural, physical, social, cultural, economic, or political) and their implications for individuals, groups, communities, or cultures. This competency will introduce students to various concepts toward building their awareness of diversity and the importance of inclusivity. Through diversity and global learning, students should seek to understand how their actions affect both local and global communities.</p>	<p>PHRD 6945 Public Health & Health Outcomes</p>	<p>Introduces students to health care delivery systems and discusses the social, political, economic factors that influence these systems. Students will link various medication use systems to their role in development and participation in health promotion, disease prevention, public health policy.</p>

Civic engagement	<p>Competency in civic engagement refers to actions wherein students participate in activities of personal and public concern that are both meaningful to the student and socially beneficial to the community. Civic engagement is "working to make a difference in the civic life of our communities and developing the combination of knowledge, skills, values and motivation to make that difference. It means promoting the quality of life in a community, through both political and non-political processes." (Excerpted from Civic Responsibility and Higher Education, edited by Thomas Ehrlich, published by Oryx Press, 2000, Preface, page vi.)</p>	<p>PHRD 5010 Introductory Pharmacy Practice Experience (IPPE) Community</p>	<p>Case-based learning courses, community and patient-care laboratory experiences using pharmacy information systems and drug databases, and independent study experiences integrated within the curriculum</p>
Creative Thinking	<p>Competency in creative thinking represents both the capacity to combine or synthesize existing ideas, images, or expertise in original ways and the experience of thinking, reacting, and working in an imaginative way characterized by a high degree of innovation, divergent thinking, and risk taking.</p>	<p>PHRD 5010 Introductory Pharmacy Practice Experience (IPPE) Community</p>	<p>Case-based learning courses, community and patient-care laboratory experiences using pharmacy information systems and drug databases, and independent study experiences integrated within the curriculum</p>
Inquiry and Analysis	<p>Inquiry is a systematic process of exploring issues/objects/works through the collection and analysis of evidence that results in informed conclusions/judgments. Analysis is the process of breaking complex topics or issues into parts to gain a</p>	<p>PHRD 6065 Evidence-based Medicine & Literature Evaluation</p>	<p>An introduction and step-wise approach to evidence-based medicine. Students understand commonly-used statistical tests and evaluate statistical results for statistical versus clinical significance. Students demonstrate by answering short drug information questions, presenting a journal club and writing a drug information paper.</p>

	better understanding of them.		
Problem Solving	Competency in problem solving represents a student's ability to design, evaluate, and implement a strategy to answer a question or achieve a goal.	PHRD 5925 Pharmaceutics	Students introduced to biophysical and chemical considerations in development of pharmaceuticals and products and compounding various dosage forms, principles of parenteral drug preparation and administrations. Knowledge gained allows students to understand formulation development and optimize dosage forms for individual patients.
Written Communication	Competency in written communication is a student's ability to write and express ideas across a variety of genres and styles. Written communication abilities develop over time through layered, interactive, and continual processes and experiences across the curriculum.	PHRD 6065 Evidence-based Medicine & Literature Evaluation	An introduction and step-wise approach to evidence-based medicine. Students understand commonly-used statistical tests and evaluate statistical results for statistical versus clinical significance. Students demonstrate by answering short drug information questions, presenting a journal club and writing a drug information paper.

4. What additional degree requirements, such as those associated with accreditation and licensure, make it impossible to include the full GT Pathways in the program curriculum?

The PharmD program requires a minimum of 300 clock hours of Introductory Pharmacy Practice Experience (IPPEs), with a minimum of 75 IPPE hours of patient care to be completed in both the community and the hospital/health system settings, and the remaining clock hours to be completed in a variety of pharmacy practice settings that expose students to patient care.

All 300 clock hours must be completed within the first three years, making it impossible to include the full GT Pathways in the program curriculum and still allow students to move through the program on time.

See page 10 of the ACPE Standards included in the attachments.

5. How will the absence of a GT Pathways waiver potentially harm students (if, for example, it extends the time to degree beyond four years, or results in certain critical courses being left out of a program)?

Without the waiver:

- Students may need additional coursework, extending time to degree and educational costs, and putting them off-cycle in the PharmD program.
- Financial burdens could be significant, particularly because recent federal legislation has reduced loan availability for new PharmD students.

Federal Graduate PLUS loans for new pharmacy (Pharm.D.) borrowers were eliminated starting July 1, 2026, under recent federal legislation, and federal loans may no longer cover the full cost of attendance. The addition of requiring the GT Pathways curriculum would result in additional financial burden.

6. How will the institution ensure that the GT Pathways waiver will not create barriers to student transfer?

The waiver is not expected to create transfer barriers because:

- Students complete all general education coursework before entering the PharmD program.
- PharmD programs generally do not accept transfer credit.
- All undergraduate coursework is completed at an accredited institution prior to admission to the PharmD program.

These students are highly unlikely to transfer into another undergraduate program. If they do, all of the undergraduate coursework that they transfer will be completed prior to admission to the PharmD program.

Section 5: Curriculum Summary

Attach or copy/paste below a program curriculum table that includes:

- Required major coursework
- Required general education
- Prerequisites (providing clarity on whether they are included in the 120-credit count)
- Electives
- Total required credits

For a student to be eligible to earn the B.S. in Medical Science, they must satisfy the following degree requirements:

- 1) Must not have earned a prior bachelor's degree.
- 2) Complete a minimum of 30 semester credits in general education (reading, critical thinking, written communications, mathematics, and technology, with a grade of C or higher from another accredited institution). A minimum of 3 semester credits is required from each category for full representation of the state of Colorado's core curriculum requirements.
- 3) Complete the science-heavy undergraduate PharmD prerequisite curriculum (47 credits) with a grade of C or higher (C- or below is not acceptable) at a college or university that is accredited by the Higher Learning Commission or a regional accreditor. PharmD prerequisites and general education:

General Biology

- Semester Credits - 8 semester (2 lab)
- Quarter Credits - 12 quarter (3 lab)

- Information:
 - Semester: General Biology I and II with labs for 8 total semester credits.
 - Quarter: General Biology I, II, and II with labs for 12 total quarter credits.
 - Biology is the study of life and living organisms; acceptable courses (must include laboratories (2)): General Biology, Life Sciences, Ecology, Botany, Zoology, Genetics, Molecular Biology, Cell Biology, and Evolution. (Physiology, Microbiology, and Biochemistry specific courses will not be accepted for these prerequisites).

General Chemistry

- Semester Credits - 8 semester (2 lab)
- Quarter Credits - 12 quarter (3 lab)
- Information:
 - Semester: General Chemistry I and II with labs for 8 total semester credits.
 - Quarter: General Chemistry I, II, and II with labs for 12 total quarter credits.
 - General or inorganic chemistry including chemical structure, atomic and molecular properties, and thermodynamics (must include laboratories).

Organic Chemistry

- Semester Credits - 8 semester (2 lab)
- Quarter Credits - 12 quarter (3 lab)
- Information:
 - Semester: Organic Chemistry I and II with labs for 8 total semester credits.
 - Quarter: Organic Chemistry I, II, and II with labs for 12 total quarter credits.
 - Organic chemistry for science majors including the study of structure, reactions, properties, and mechanisms of organic molecules (must include laboratories).

Biochemistry

- Semester Credits - 3 semester
- Quarter Credits - 4 quarter
- Information:
 - No lab required.
 - The Biochemistry course must be an upper-level course with Organic Chemistry as a prerequisite.
 - Biochemistry including a systematic study of carbohydrates, lipids, amino acids, proteins, nucleic acids, and their components including the metabolism of biological compounds and the interrelations among the carbon, nitrogen, and energy cycles.

Microbiology

- Semester Credits - 2 semester
- Quarter Credits - 3 quarter
- Information:

- No lab required.
- Microbiology including a survey of distinguishing characteristics of microorganisms based on structural-functional relationships, taxonomy, growth and physical chemical metabolism and genetics. This should include an emphasis on infectious diseases, basic immunology, and microbial ecology. Molecular or cellular biology courses will not be accepted as a substitute for microbiology.

Human Physiology

- Semester Credits - 4 semester (1 lab)
- Quarter Credits - 6 quarter (2 lab)
- Information:
 - Can be fulfilled with Anatomy and Physiology I with Lab, or Human Physiology with Lab. If your institution is on quarter credit hours, the third sequence of Anatomy and Physiology with Lab (III) is also required.
 - Human Physiology is the study of functions and mechanisms: focusing on how organisms, organ systems, organs, cells and biomolecules carry out the chemical and physical functions within the human body.

Calculus I

- Semester Credits - 3 semester
- Quarter Credits - 4 quarter
- Information:
 - Topics should cover differential and integral calculus of algebraic, logarithmic, exponential functions, limits, applications of the derivative, integration, and applications of the definite integral. (Precalculus will not be accepted.)

English Composition

- Semester Credits - 3 semester
- Quarter Credits - 4 quarter
- Information:
 - Must take English Composition I or II and Advanced Writing for a minimum of 3 semester credit hours.
 - Courses focusing on the abilities and skills needed to write effective expository prose. Emphasis is on planning, writing, and revising short and long essays and research papers. Writing intensive courses (designated as such by the institution) will be reviewed on an individual basis; course descriptions and/or syllabi will be required. ESL courses are not eligible to meet this requirement. Literature courses will be accepted if English composition instruction is included in the course syllabus.
 - *Waivers will be reviewed on a case by case basis.*

Humanities/Social Sciences

- Semester Credits - 8 semester
- Quarter Credits - 12 quarter
- Information:

- Humanities is the academic disciplines that studies the aspects of human society and culture.
Social Sciences is the branch of science devoted to the study of human societies and the relationships among individuals within those societies.
- Acceptable courses include, but are not limited to:
Literature, Philosophy, Psychology, Sociology, Anthropology, Archaeology, Geography, History, Law, Linguistics, Politics, and Foreign Languages.
**Coursework used for other CU Pharmacy prerequisites cannot be double counted within Humanities/Social Sciences credit.*

4) Must have completed the first two years of the PharmD curriculum:

PHRD 5010	Introductory Pharmacy Practice Experience (IPPE) Community (2 Credits)	This is the first in a series of experiential-based courses, providing 80 hours of community pharmacy practice experience. Students will participate in all facets of community pharmacy practice, with a particular focus on the development of communication and professionalism skills.
PHRD 5020	Rx Essentials: Introduction to Calculations and Medical Terminology (1 Credit)	This intensive 1-week course is designed to provide PharmD students with a comprehensive review of prerequisite mathematics skills essential for pharmaceutical calculations, along with an introduction to calculations and medical terminology and abbreviations commonly used in pharmacy practice.
PHRD 5025	Applied biological chemistry (2 credits)	Course builds upon student knowledge of biochemistry to explore applications of biochemistry to diseases, drug actions, and drug development. Knowledge gained from this course is used as a foundation for understanding the rationale for the therapeutic uses of drugs.
PHRD 5040	Professional, Personal and Career Development 1 (1 Credit)	<p>This course is the first in a 6-part series that spans P1-P3. This is not a traditional didactic course, but rather a collective of learning experiences meant to foster professional, personal and career development. Five themes capture the bulk of these experiences, and are often integrated: 1) Professional/personal identity formation ; 2) Career development; 3) Service learning and co-curricular activities; 4) Wellness; 5) Health equity</p> <p>Throughout this course series, mentorship will support your journey to becoming a pharmacist. You will assess and articulate how you demonstrate positive professional behaviors while exploring your professional interests, values, and goals. The course will guide you in reflecting on your development as a student pharmacist and provide</p>

		opportunities to practice effectively expressing your identity, decision-making, and aspirations within the profession.
PHRD 5075	Self-Care and Nonprescription Medications (4 Credits)	Course prepares students to be able to 1) collect appropriate patient data to make an assessment for self-care (e.g. nonprescription products), 2) conduct a patient-centered assessment, and 3) design, implement, evaluate and adjust a patient-centered self-care plan.
PHRD 5920	Medicinal Chemistry (3 Credits)	This course explores medicinal chemistry concepts using clinically relevant case studies, designed to examine mechanism(s) of drug action, structure-activity relationships, drug metabolism, drug resistance and other concepts related to the pharmacology and clinical use of therapeutic drugs.
PHRD 5925	Pharmaceutics (4 credits)	Students introduced to biophysical and chemical considerations in development of pharmaceuticals and products and compounding various dosage forms, principles of parenteral drug preparation and administrations. Knowledge gained allows students to understand formulation development and optimize dosage forms for individual patients.
PHRD 5935	Pharmacology & Toxicology (4 Credits)	This is an introductory course to pharmacology, the study of therapeutic drug effects, and toxicology, the study of adverse drug effects. Basic principles of these topics will be explored using several drugs and drug classes as examples.
PHRD 5940	PHRD 5940 Professional, Personal and Career Development 2 (1 Credit)	<p>This course is the first in a 6-part series that spans P1-P3. This is not a traditional didactic course, but rather a collective of learning experiences meant to foster professional, personal and career development. Five themes capture the bulk of these experiences, and are often integrated: 1) Professional/personal identity formation ; 2) Career development; 3) Service learning and co-curricular activities; 4) Wellness; 5) Health equity</p> <p>Throughout this course series, mentorship will support your journey to becoming a pharmacist. You will assess and articulate how you demonstrate positive professional behaviors while exploring your professional interests, values,</p>

		and goals. The course will guide you in reflecting on your development as a student pharmacist and provide opportunities to practice effectively expressing your identity, decision-making, and aspirations within the profession.
PHRD 5985	Pharmacotherapy 1 (4 Credits)	This 7 course series includes pathophysiology, pharmacology, and therapeutics of a range of system based physiological conditions. Standards of care, controversial issues, pharmacotherapy advances, and patient management are covered. Areas covered in this course: pulmonology, dermatology, ophthalmology, otic diseases, OB/GYN, Urology, ED.
IPCP 5000	Interprofessional Collaborative Practice (1 Credit)	A one semester course required of health professions students from the, dental, medical, nursing, pharmacy, physical therapy, and physician assistant programs on the Anschutz Medical Campus.
PHRD 5050	Practice Readiness 1 (4 credits)	This course is the first in a five-course series focused on developing practice readiness. Key components include patient-centered communication, pharmaceutical calculations, drug information, medication therapy problem solving, and medication use processes, including top 200 drug knowledge. Active learning methods are used to promote skill development and application.
PHRD 5950	Practice Readiness 2 (3 credits)	This course is the second in a five-course series focused on developing practice readiness. Key components include patient-centered communication, pharmaceutical calculations, drug information, medication therapy problem solving, and medication use processes, including top 200 drug knowledge. Active learning methods are used to promote skill development and application.
PHRD 6015	Clinical Pharmacokinetics (3 Credits)	The influence of physiological and pathophysiological factors on drug levels is considered. Knowledge gained allows students to calculate appropriate dosing of drugs in patients and anticipate how drug doses should be adjusted in disease and the presence of other drugs.
PHRD 6065	Evidence-based Medicine & Literature Evaluation (3.5 Credits)	An introduction and step-wise approach to evidence-based medicine. Students understand commonly-used statistical tests and evaluate statistical results for statistical versus clinical significance. Students demonstrate by answering short drug information questions, presenting a journal club and writing a drug information paper.

PHRD 6085	Pharmacotherapy 2 (5 Credits)	This 7 course series includes pathophysiology, pharmacology, and therapeutics of a range of system based physiological conditions. Standards of care, controversial issues, pharmacotherapy advances, and patient management are covered. Area covered in this course: Cardiology
PHRD 6095	Pharmacotherapy 3 (3.5 Credits)	This 7 course series includes pathophysiology, pharmacology, and therapeutics of a range of system based physiological conditions. Standards of care, controversial issues, pharmacotherapy advances, and patient management are covered. Areas covered in this course: endocrinology and renal.
PHRD 6910	Introductory Pharmacy Practice Experience (IPPE) Health System (2 Credits)	This experiential-based course provides 80 hours of health-system pharmacy practice, focusing on the delivery of patient care and systems used to provide care to multiple patients. Course further develops professionalism, communication, and skills needed for advanced experiential training.
PHRD 6945	Public Health & Health Outcomes (3 Credits)	Introduces students to health care delivery systems and discusses the social, political, economic factors that influence these systems. Students will link various medication use systems to their role in development and participation in health promotion, disease prevention, public health policy.
PHRD 6985	Pharmacotherapy 4 (5 Credits)	This 7 course series includes pathophysiology, pharmacology, and therapeutics of a range of system based physiological conditions. Standards of care, controversial issues, pharmacotherapy advances, and patient management are covered. Area covered in this course: Infectious Diseases
PHRD 6995	Pharmacotherapy 5 (3.5 Credits)	This 7 course series includes pathophysiology, pharmacology, and therapeutics of a range of system based physiological conditions. Standards of care, controversial issues, pharmacotherapy advances, and patient management are covered. Areas covered in this course: psychiatry, neurology.
IPHE 6000	Interprofessional Healthcare Ethics & Health Equity (1 Credit)	A one semester course required of health professions students from the, dental, medical, nursing, pharmacy, physical therapy, and physician assistant programs on the Anschutz Medical Campus.
PHRD 6050	Practice Readiness 3 (2 credits)	This course is the third in a five-course series focused on developing practice readiness. Key components include patient-centered communication, pharmaceutical calculations, drug information, medication therapy problem solving, and medication use processes, including top 200 drug

		<p>knowledge. Active learning methods are used to promote skill development and application.</p>
PHRD 6950	Practice Readiness 4 (2 credits)	<p>This course is the fourth in a five-course series focused on developing practice readiness. Key components include patient-centered communication, pharmaceutical calculations, drug information, medication therapy problem solving, and medication use processes, including top 200 drug knowledge. Active learning methods are used to promote skill development and application.</p>
PHRD 6040	Professional, Personal and Career Development 3 (0.5 Credit)	<p>This course is the third in a 6-part series that spans P1-P3. This is not a traditional didactic course, but rather a collective of learning experiences meant to foster professional, personal and career development. Five themes capture the bulk of these experiences, and are often integrated: 1) Professional/personal identity formation ; 2) Career development; 3) Service learning and co-curricular activities; 4) Wellness; 5) Health equity</p> <p>Throughout this course series, mentorship will support your journey to becoming a pharmacist. You will assess and articulate how you demonstrate positive professional behaviors while exploring your professional interests, values, and goals. The course will guide you in reflecting on your development as a student pharmacist and provide opportunities to practice effectively expressing your identity, decision-making, and aspirations within the profession.</p>
PHRD 6940	Professional, Personal and Career Development 4 (0.5 Credit)	<p>This course is the fourth in a 6-part series that spans P1-P3. This is not a traditional didactic course, but rather a collective of learning experiences meant to foster professional, personal and career development. Five themes capture the bulk of these experiences, and are often integrated: 1) Professional/personal identity formation ; 2) Career development; 3) Service learning and co-curricular activities; 4) Wellness; 5) Health equity</p> <p>Throughout this course series, mentorship will support your journey to becoming a pharmacist. You will assess and articulate how you demonstrate positive professional behaviors while exploring your professional interests, values, and goals. The course will guide you in reflecting on your development as a student pharmacist and provide</p>

		opportunities to practice effectively expressing your identity, decision-making, and aspirations within the profession.
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5) Must have completed a minimum of 120 semester credits.

See attached degree audit.

Section 6: Governing Board Approval

Date Program Approved by Institutional Governing Board: 8/19/2005

Section 7: Attachments Checklist

- ☒ Curriculum table (required)
- ☒ Accreditation or licensure documentation (optional)
- ☐ Employer/advisory board documentation (optional)
- ☐ Regulatory or statutory citations (optional)
- ☒ Additional supporting materials (optional)

Section 8: Certification

I certify that the information provided in this request is accurate and complete to the best of my knowledge.

Name: Allison Diekhoff

Title: University Registrar

X Allison Diekhoff

Signature:

Date: 9/9/2026