TRANSFER AGREEMENT

PIKES PEAK COMMUNITY COLLEGE

AND

COLORADO SCHOOL MINES

DATE

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Transfer Agreement
Between
Colorado School of Mines and Pikes Peak Community College

Introduction

This document describes transfer procedures and course equivalencies between Colorado School of Mines (Mines) and Pikes Peak Community College (PPCC), and is intended for use by students who wish to transfer from PPCC to Mines prior to, or upon completion of, their AA, AS or AES degree. Mines and the Colorado Community College System (CCCS) have collaboratively developed an Associate in Engineering Science (AES) degree that is specific to this agreement. Mines strongly encourages PPCC students to enroll in the AES degree in order to facilitate a more seamless reverse transfer process for the granting of the Associates degree (see Appendices D and E). This guide contains the following information:

1) admission criteria and procedures at Mines,
2) policies on the transfer of credit,
3) policies on transfer appeals procedures, and
4) course equivalencies between PPCC and Mines.

I. Admission Criteria and Procedures

A. Admissions Requirements: Colorado School of Mines seeks to admit a diverse and dynamic student population representative of the state of Colorado, the nation and beyond. Mines admits students who have demonstrated the ability to accomplish classroom and laboratory work and benefit from our programs. Admission is competitive and the decision to admit a student is based on our confidence in one's ability to earn a degree at Mines.

An applicant to Mines is considered to be a transfer student if he/she/they has enrolled in coursework at another college after graduating from high school. The minimum requirements for admission consideration for all transfer students is outlined in the Mines Catalog. The catalog that is in effect at the time of the student's initial enrollment at Mines will be used in determining admission.

B. Treatment of GPA: The grade point average of the transfer student for admission purposes will be as computed by the Mines Admissions Office and will be performed in accordance with the established procedures outlined in the version of the Mines Catalog that is in effect at the time of the student's initial enrollment at Mines. Once admitted and enrolled at Mines, the calculation of the student's grade point average will be determined only from the courses completed at Mines.

C. Treatment of associate degrees: Associate of Arts, Associate of Science, and Associate of Engineering Science degrees will be evaluated for admission purposes using the course equivalencies established between PPCC and Mines, as listed in Appendices A-C. The explicit requirements for the AES from the CCCS are given in Appendix D.

D. Application procedures and deadlines: A transfer student should apply for admission to Mines at the beginning of the final quarter or semester of attendance at PPCC. Application deadlines are listed on the Mines website at https://www.mines.edu/undergraduate-admissions/transfer-students/. The application will be evaluated upon receipt of the completed application form, high school transcript or copy of the GED, transcripts covering all work taken from each university or college attended, and a list of courses in progress. All of these materials must be received by Mines no later than 28 days prior to the date of registration for the semester in which the student plans to enroll. Mines Admissions will notify the student about his/her/their admission status. Admission is subject to satisfactory completion of current courses in progress and submission of a final, complete transcript.

II. Transfer of Credit

A. Policies for accepting grades in transfer: No course with a final grade less than "C" will be accepted for transfer credit. Transfer credit earned at PPCC will have the grade of "T" assigned on the student's permanent record at Mines. No grade points will be recorded for these courses and they will not affect the Mines grade point average.

B. Treatment of advanced placement and non-traditional methods of awarding credit: Advanced Placement, International Baccalaureate, graded proficiency exams, and other non-traditional methods of awarding credit will be handled on a case-by-case and course-by-course basis. Equivalencies between such courses or credit and existing courses at Mines will be made by the Registrar's Office and the relevant academic department(s). The current AP and IP credit guidelines can be found at https://www.mines.edu/registrar/advanced-credits/. No credit is granted for CLEP or vocational courses.

C. Maximum number of hours accepted in transfer: The total number of hours required to complete a degree program at Mines varies, depending on the degree granting department. Minimum Mines credit hour requirements for residency and upper-division courses are provided in Section II-D below. All courses listed in the Transfer Guide (Appendices A-C) will be transferred in direct substitution for the designated Mines courses if needed for that degree program. Courses other than those listed in Appendices A-C will be evaluated on a course-by-course basis, and credit granted where the course is judged to be the equivalent of an analogous Mines course or applicable to free elective credit. Hours will be awarded based on hours actually completed in the original course.

D. Residency and upper-division course credit requirements: A minimum of 30 hours of credit in 300 and 400-level technical courses (as defined by the specific degree programs listed in the Mines Catalog in effect at the time of the student's initial Mines enrollment) must be completed in residence at Mines. At least 15 of these 30 hours must be taken in the senior year.

E. Accreditation requirements for transfer of credit: Twelve engineering degree programs at Mines are accredited by the Accreditation Board for Engineering and Technology (ABET). Mines has determined that the PPCC courses listed in Appendices A-C are the curricular equivalent of the designated Mines courses. In the case of substitution to this prescribed equivalency agreement, such changes must be made with the full consent of the Registrar's Office on behalf of Academic Affairs at Mines in order to assure compliance with ABET requirements for curricular distribution.

F. Early Transfer: To avoid loss of credit and other transfer problems, transferring as early as possible is recommended. In some cases, transfer prior to completion of the AES, AA or AS degree is advisable. The curricular structure and content at Mines builds on fundamentals developed during the Mines lower-division core courses; it is to the student's advantage to obtain this background at the earliest possible date. The courses listed in Appendix A are required for all degree programs at Mines; completion of these courses prior to transfer may be very beneficial for the student.

G. Reverse transfer for Completion of the AES: Any student enrolled in the CCCS AES degree who does not complete that degree prior to transfer will be eligible to apply for the AES degree upon completion of an appropriate set of courses at Mines via reverse transfer. These students will be evaluated for the AES degree upon completion of their third semester at Mines unless they explicitly opt out of the reverse transfer program.

H. Treatment of AES, AA and AS degree in awarding credit: No special considerations for recognition of the Associate of Engineering Science, Associate of Science or Associate of Arts degrees, other than those prescribed for award of transfer credit, are specified. Courses taken at PPCC for completion of an Associate of Arts or Associate of Science degree are awarded transfer credit at Mines in accordance with the procedures outlined in section II-E above.

I. Maximum age of credit: Courses meeting the guidelines stated above and taken within five years of the student's application for transfer will automatically be granted transfer credit in accordance with the procedures stated here-in. Courses taken between five and ten years prior to application for transfer will be evaluated on a course-by-course basis by the Mines Registrar's Office and faculty from the relevant academic department(s). In general, courses taken more than ten years prior to the student's application for admission will not be considered for transfer credit.

J. Currently Enrolled Student at Mines: The articulation of transfer credit detailed in this agreement is applicable to ACC students who apply to and are accepted into Mines. This articulation does not apply to currently enrolled Mines students, who will be required to request approval for transfer credit according to policies in place for Mines students.

K. Transfer appeals process:
Procedures for appeal of any decision dealing with student transfer between Colorado Public Institutions are specified by the State of Colorado. For information go to http://highered.colorado.gov/dhedefault.html.

III. Review and update of this agreement

This agreement will expire three years from the effective date noted on the first page. Pikes Peak Community College and the Colorado School of Mines will review this agreement at least every three years to ensure that the course information is current, in order to facilitate the successful transfer of students.

APPENDIX A
Required Course Equivalencies

The following courses are required for all degree programs at Mines.

Colorado School of Mines Courses			*CCCS Equivalent Courses*		
Course ID	**Name**	**Credit Hours**	**Course ID**	**Name**	**Credit Hours**
MATH111	Calculus I	4	MAT2410	Calculus I	5
MATH112	Calculus II[1]	4	MAT2420	Calculus II	5
MATH213	Calculus III[1]	4	MAT2430 **or** MAT2431	Calculus III[2]	4 or 5
MATH225	Differential Equations	3	MAT2560 **or** MAT2561 **or** MAT2562	Differential Equations[3]	3 or 4
CHGN121	Principles of Chemistry I	4	CHE1111	College Chemistry I	5
PHGN100	Physics I	4.5	PHY2111	Physics I	5
EBGN201	Principles of Economics	3	ECO2001 **or** ECO2002	Principles of Macroeconomics	3
CSM101	Freshman Seminar	0.5	Waived for students who have completed 30 or more hours at the college level		
HASS100	Nature and Human Values	4	PHI2018 **and either** ENG1022 **or** ENG1020	Environmental Ethics Engineering Composition II Technical Writing	3 3
HASS200	Global Studies	3	HIS2015 **or** SOC2007 **or** POS2025 **or** LIT2002	20th Century World History or Environmental Sociology or Comparative Government or World Lit after 1600	3
PAGNI-IV	Physical Education I-IV[4]	2		2 x PE Activity	2
Distributed H&SS requirements[5]		6	Up to 6 credits of foreign language at 1000 to 2000 level. 2000 level or above literature, history, humanities, political science, social science, etc. not listed above (i.e., excludes courses used to meet HASS200 or EBGN201 requirements)		

[1] Students should take the Calculus II and III sequence at the same institution. If a transfer student has only completed through Calculus II, the student may be asked to complete a review assignment to bridge any material not covered in the course being transferred to Mines.

[2] If possible, Mines would prefer students take MAT2431 for Calculus III credit.

[3] If possible, Mines would prefer students take MAT2561 for Differential Equations credit.

[4] Each student at Colorado School of Mines is required to complete 4 separate semesters of Physical Education as a graduation requirement. The Physical Education requirement does not apply to students with DD 214 (veterans) or students whose first day of enrollment at Mines comes when the student is 26 years of age or older. Students transferring into Mines under this Articulation Agreement who need to fulfill the Physical Education requirement will have the 4 separate semester requirement waived and will be able to transfer in 2 credit hours of Physical Education from the Community College system for the 2 credit hours required in the Mines Core Curriculum.

[5] Three additional Humanities and Social Sciences credits must be taken at the 400 level at Mines. Students should consult the Mines Catalog to determine which courses may satisfy this requirement.

APPENDIX B
Distributed Science Course Equivalencies

In addition to the courses listed in Appendix A, every student at Mines must also take three of the listed distributed science courses. Each degree program at Mines dictates which of the three distributed science courses are acceptable for that program; please consult the Mines Catalog or an advisor at Mines for additional information.

Colorado School of Mines Courses			*CCCS Equivalent Courses*		
Course ID	**Name**	**Credit**	**Course ID**	**Name**	**Credit Hours**
CBEN110	Fundamentals of Biology I	4	BIO1111	Biology I	5
CHGN122	Principles of Chemistry II[6]	4	CHE1112	College Chemistry II	5
CSCI101	Introduction to Computer Science	3	CSC1019 **and either** CNG1024 **or** CIS2043	Introduction to Programming Networking I: Network + Introduction to SQL	3 3
PHGN200	Physics II[6]	4.5	PHY2112	Physics II	5
GEGN101	Earth and Environmental Systems	4	GEY1111	Physical Geology	4
MATH201	Intro to Probability and Statistics for Eng.	3	MAT1260	Intro to Statistics	3

The acceptable distributed science courses listed by major are listed in the Mines *Catalog*. If a student takes a distributed science course or its equivalent that is not allowed or required for their major, then the student will have to take an additional appropriate course to satisfy the requirements for their degree.

[6] Depending on choice of major, students are encouraged to take the entire sequence in Chemistry and/or Physics at the Community College.

APPENDIX C
Other Course Equivalencies

Mines will accept the following courses from ACC students with no additional review, provided the student has earned a grade of "C" or higher in these courses. Note that these courses do not count for core curriculum credit at Mines, but may apply to free electives or fulfill degree requirements for certain majors. View the Mines Catalog for additional details.

Colorado School of Mines Courses				*CCCS Equivalent Courses*		
Course ID	**Name**	**Credit Hours**		**Course ID**	**Name**	**Credit Hours**
CSCI260	Fortran Programming	2		CSC1019[7]	Intro to Programming	3
CSCI261	Programming Concepts	3		CSC1060	Computer Science I: (Language)	4
CSCI262	Data Structures	3		CSC1061	Computer Science II: (Language)	4
GEGN204	Geologic Principles and Processes	2		GEY112	Historical Geology w/ Lab	4
CEEN241	Statics	3		EGG2011	Statics	3
MEGN315	Dynamics	3		EGG2012	Dynamics	3

In addition to the courses explicitly listed in this table, other courses are currently under consideration for inclusion in future versions of this agreement. Should additional courses be approved for inclusion in this agreement between review cycles, Mines will add those courses to this table.[8]

[7] If taken with either CNG1024 or CIS2043, this transfers in as CSCI101. If taken alone, it transfers in as CSCI260.
[8] Other future courses developed in collaboration between CCCS and Mines faculty.

APPENDIX D
The CCCS Associates in Engineering Science (AES) for articulation with the Colorado School of Mines

The Colorado School of Mines (Mines) is proposing the co-creation of a 2+3[9] Articulation agreement that encourages students from across the CCCS (plus CMC and Aims) to pursue opportunities at the Colorado School of Mines. We are mindful that there is a lot of untapped talent and that the cross-section of students who we would like to appeal to with this "pathway" represents students with (potentially) very different preparation prior to entry into the 2-year system.

With this in mind, we propose a degree program modelled on our agreement with RRCC that is flexible enough to (i) conform to our existing arrangement with CCCS and (ii) be accessible to students whose background requires some degree of remediation to prepare for courses in the existing and future CCCS agreements while still providing an educational experience designed to articulate with the curriculum at Mines. To this end, we are proposing a 60 credit hour AES, consisting of 22 credit hours of General Education Credits (1 English course, 1 Philosophy Course, 1 Arts and Humanities/History course, 1 Social Sciences course, 1 Laboratory Science course and 1 Mathematics course). Beyond these 22 hours, there is considerable flexibility in specifying the remainder of the 60 credits in the AES.

Additionally, through the Mines-CCCS Transfer Articulation Agreement (MOU) being developed in association with the AES degree, we hope to establish a reverse transfer protocol that is opt-out and will be triggered upon the completion of a fixed number of credit hours at Mines to ensure that eligible students (under the Articulation Agreement) who transfer to Mines prior to AES degree completion will be awarded the AES degree upon completion of the degree requirements based on their completed coursework at Mines. This will require some additional thought as well as approval from CDHE but may serve as a model for targeted opt-out reverse transfer protocols in other highly-specialized MOUs.

Associate of Engineering Science (AES) Degree Requirements (60.0 Hrs):

General Education Requirements (22.0 Hrs)[10]:

1) ENG1022 – English Composition II (3.0) **OR** ENG1020 – Technical Writing (3.0)
2) PHI 2018 – Environmental Ethics (3.0)[11] [Mines HASS100]
3) HIS2015 – 20th Century World History **OR** SOC2007 – Environmental Sociology (3.0) **OR** POS2025 – Comparative Government (3.0) **OR** LIT2002 – World Lit after 1600 (3.0)[12] [Mines HASS200]
4) ECO2001 – Principles of Macroeconomics (3.0) **OR** ECO2002 – Principles of Microeconomics (3.0)[13] [Mines EBGN201]
5) MAT2410 – Calculus I (5.0)[14] [Mines MATH111]
6) CHE1111 – College Chemistry I (5.0)[15] [Mines CHGN121]

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[9] Students completing the AES should have a pathway to graduate from Mines in no more than 3 years beyond the AES degree. Students completing coursework that maximizes the articulation of transfer credit may even be able to complete a Mines degree within 2 years beyond the AES.

[10] This set of GE courses can be meaningfully transferred in for 17.0 credit hours of explicitly required courses in the existing Mines Core. The extra 5.0 hours would be eligible for Free Elective credit at Mines.

[11] Either ENG1022 or ENG1020 plus PHI2018 currently transfer in as HASS100 in the existing Mines Core.

[12] Any one of these courses transfers in as HASS200 in the existing Mines Core.

[13] The faculty in Economics and Business at Mines have agreed to accept either ECO2001 or ECO2002 rather than requiring both. It is their intention to assess the impact of this change over the next 2-3 years prior to permanently changing transfer policies around this course.

[14] While there will be four math courses required in total, we include Calculus I in the Gen Ed requirements since it is the entry-level mathematics course at Mines. Depending on mathematics placement on entry to the CCCS, a given student will complete the mathematics requirement in AES by taking MAT2410 (including any appropriate prerequisite courses).

[15] Chemistry I (with lab) is required of all majors at Mines and CHE1111 has already been approved as equivalent to CHGN121 in the existing Mines Core.

Engineering Science Requirements (24.0-27.0 Hrs)[16]:

1) 3 additional semester of Mathematics courses from
    a. MAT2420 – Calculus II (5.0) [Mines MATH112]
    b. MAT2430 – Calculus III (4.0) OR
       MAT2431 – Calculus III with Engineering Applications (5.0)[17] [Mines MATH213]
    c. MAT2561 – Differential Equations with Engineering Applications (4.0)[18] OR
       MAT2560 – Differential Equations (3.0) OR
       MAT2562 – Differential Equations with Linear Algebra (4.0) [Mines MATH225]
2) 2 additional semesters of Laboratory Science courses from
    a. BIO1111 – Biology I (5.0) [Mines CBEN110]
    b. CHE1112 – College Chemistry II (5.0) [Mines CHGN122]
    c. GEY1111 – Physical Geology (4.0) [Mines GEGN101]
    d. PHY2111 – Physics I (5.0) [Mines PHGN100]
    e. PHY2112 – Physics II (5.0) [Mines PHGN200]
3) EGT1110 – Introduction to Design and Engineering Applications (3.0)[19] [Mines EDNS151]

Electives (11.0-14.0 Hrs) – chosen based on program(s) of interest at Mines[20]:

1) Any of the following mathematics and laboratory science courses not being applied to the Engineering Science requirements
    a. MAT1260 – Introduction to Statistics (3.0) [Mines MATH201]
    b. BIO1111 – Biology I (5.0) [Mines CBEN110]
    c. CHE1112 – College Chemistry II (5.0) [Mines CHGN122]
    d. GEY1111 – Physical Geology (4.0) [Mines GEGN101]
    e. PHY2111 – Physics I (5.0) [Mines PHGN100]
    f. PHY2112 – Physics II (5.0) [Mines PHGN200]
2) Other Engineering-Specific courses developed in collaboration between Mines and CCCS faculty, including
    a. EGG2011 – Statics (3.0) [Mines CEEN241]
    b. EGG2012 – Dynamics (3.0) [Mines MEGN315]
    c. Other future courses developed in collaboration between CCCS and Mines faculty. (Students interested in a degree program requiring one or more of these courses and who have the prerequisites to complete these courses are strongly encouraged to include them, as appropriate, in their AES degree. Students at a CCCS campus that does not offer these courses may have the opportunity to enroll remotely in the courses at a campus that does offer them. CCCS Advisors should be able to direct students to these course opportunities where appropriate.)[23]
3) CSC1019 – Introduction to Programming (3.0) AND either CNG1024 – Networking I OR CIS2043 – Intro to SQL (3.0)[25] [Mines CSCI101]
4) CSC1060 – Computer Science I (4.0) [Mines CSCI261]
5) CSC1061 – Computer Science II (4.0) [Mines CSCI262]

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[16] Depending on choice of mathematics and science courses, the Engineering Science Requirements would constitute between 24.0 (MATH2420,2430,2560 and GEY1111) and 27.0 (MAT2420,2431,2561 and non-GEY science option).

[17] If possible, Mines would prefer that the student take MAT2431 for Calculus III credit as this course's syllabus is most consistent with our course.

[18] If possible, Mines would prefer that the student take MAT2561 for Differential Equations credit as this course's syllabus is most consistent with our course.

[19] Currently the only course that satisfies the EDS department learning outcomes for this course at Mines is EGT1110 (offered at RRCC). Mines plans to host faculty workshops to facilitate development of other design courses in the CCCS curriculum (EGG1040 for example) to ensure that those courses are satisfactory for transfer to Mines for EDNS151 credit. Once EDS at Mines signs off on additional courses as satisfactory, those courses will be added as options under item 3) in the Engineering Sciences Requirements.

[20] Elective credit hour requirement is dependent on choice of Engineering Science Requirements. General Education Requirements, Engineering Science Requirements and Electives should sum to at least 60.0 hours.

[23] Mines faculty are currently collaborating on the development of a few such courses with 2-year partners. If possible, these course opportunities may be extended system-wide via summer professional development opportunities at Mines of real-time remote delivery options.

[25] Both CSC 1019 and (CNG 1024 or CSC 2043) must be taken to receive credit for CSCI 101.

6) PE Activities (2.0)[26] [Mines 4 semester Physical Activities requirement waived, but students will still need 2 hrs]
7) Foreign Language, Literature, History, Humanities, Political Science, Social Science[28] ($\leq$ 6.0) [Mines H&SS Mid-Level Core Curriculum Requirement]

[26]Each student at Colorado School of Mines is required to complete 4 separate semesters of Physical Education as a graduation requirement, totaling 2.0 credit hours. The Physical Education requirement does not apply to students with DD 214 (veterans) or students whose first day of enrollment at Mines comes when the student is 26 years of age or older. Additionally, for students transferring into Mines under an articulation agreement associated with the AES, the 4 separate semesters requirement is waived and 2.0 credit hours of transferred physical education coursework will satisfy the existing Mines Core Curriculum degree requirement.

[28] Up to 6 credits of foreign language at 1000 to 2000 level. 2000 level or above literature, history, humanities, political science, social science, etc. not listed above.

Appendix E
Recommended Course Plan for the Associates in Engineering Sciences for Transfer to Mines

1st Semester:

MAT2410[1] (5.0)	CHE1111[1] (5.0)	ENG1022[2] (3.0)	ECO2001 (3.0)		**16.0 at CC**
MATH111 (4.0)	CHGN121 (4.0)		EBGN201 (3.0)	Free Elect. (5.0)	**16.0 at Mines**

2nd Semester:

MAT2420[1] (5.0)	PHY2111[1] (5.0)	PHI2018[2] (3.0)	EGT1110 (3.0)		**16.0 at CC**
MATH112 (4.0)	PHGN100 (4.5)	HASS100 (4.0)	EDNS151 (3.0)	Free Elect. (0.5)	**16.0 at Mines**

3rd Semester:

MAT2431[1] (5.0)	PHY2112[3] (5.0)	HIS2015[4] (3.0)	Phys Ed (1.0)		**14.0 at CC**
MATH213 (4.0)	PHGN200 (4.5)	HASS200 (3.0)	PA I&II (1.0)	Free Elect. (1.5)	**14.0 at Mines**

4th Semester:

MAT2561[1] (4.0)	CHE1112[3] (5.0)	Eng. Elect[5] (4.0)	Phys Ed (1.0)		**14.0 at CC**
MATH225 (3.0)	CHGN122 (4.0)	Mines Equiv (3.0)	PA III&IV (1.0)	Free Elect. (3.0)	**14.0 at Mines**

[1] In instances where the CCCS course has more credit hours assigned to it than the equivalent course at Mines, the appropriate number of credit hours will be applied to the Mines course and any excess credit hours will be applied to Free Elective at Mines.

[2] Students should take either ENG1022 or ENG1020 in combination with PHI2018 to earn transfer credit for HASS100 at Mines. 1 credit hour of the ENG course and 3 credit hours of PHI218 will be applied to the 4 credits for HASS100 at Mines. The remaining 2 credit hours are applied to Free Elective at Mines.

[3] Second laboratory science requirement should be taken. Choice of course is dependent on the program of interest at Mines. In general, CHGN122 and PHGN200 are acceptable distributed science electives for almost every degree program at Mines.

[4] Pick an appropriate course to meet the HASS200 requirement at Mines.

[5] Pick an appropriate engineering elective course based on program of interest at Mines.

APPENDIX F
Contacts

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