

The purpose of a statewide articulation agreement is to identify the courses a student at a Colorado public community college must complete as part of an AA/AS degree to be guaranteed to be able to complete the designated baccalaureate degree program at any public four-year college and university (hereafter referred to as receiving institutions) that offers that program within the minimum number of credits designated by the Colorado Commission on Higher Education.

Required Courses	Credits	Pre or Co Reqs Rqd	Course Availability		
			Fall	Spr	Sum
General Education Courses					
• Arts / Humanities GT-AH1-AH4	3	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
• Arts / Humanities GT-AH1-AH4	3	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
• Arts / Humanities GT-AH1-AH4	3	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
• ENG 121 - English Composition I: GT-CO1*(3 Cr.)	3	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
• ENG 122 - English Composition II: GT-CO2 (3 Cr.)	3	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
• History GT-HI1	3	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
• MAT 201 - Calculus I: GT-MA1 (5 Cr.)	5	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
• PHY 211 - Physics: Calculus-Based I with Lab: GT-SC1* (5 Cr.)	5	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
• PHY 212 - Physics: Calculus-Based II with Lab: GT-SC1* (5 Cr.)	5	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
• Social / Behavioral Science GT-SS1-SS3	3	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Additional Required Courses					
• CHE 111 - General College Chemistry I with Lab: GT-SC1* (5 Cr.)	5	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
• CHE 112 - General College Chemistry II GT-SC1 OR CSC 160 - Computer Science I*	4-5	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
• MAT 202 - Calculus II: GT-MA1 (5 Cr.)	5	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
• MAT 203 - Calculus III OR MAT 204 - Calculus III w/Engineering Applications	4-5	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
• MAT 265 - Differential Equations OR MAT 261 - Differential Equations with Engineering Applications OR MAT 266 Differential Equations with Linear Algebra GT-MA1	3-4	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
• PHY 213 - Physics III: Calculus-Based Modern Physics	3	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Pre-Requisites, Co-Requisites, and Recommendations (grade C or better required)

Where requirements are listed as course categories (e.g. Electives, Arts/Humanities) rather than as specific courses, please note that depending upon course choice, pre-requisites may be required.

CHE 111 - General College Chemistry I with Lab: GT-SC1* (5 Cr.)

- Pre-Requisite: MAT 121 - College Algebra: GT-MA1 or equivalent placement scores

ENG 121 - English Composition I: GT-CO1*(3 Cr.)

- Co-Requisite: CCR 094 - Studio 121 (3 Cr.)

ENG 122 - English Composition II: GT-CO2 (3 Cr.)

- Pre-Requisite: ENG 121 - English Composition I OR ENG 131 - Technical Writing I

MAT 201 - Calculus I: GT-MA1 (5 Cr.)

- Pre-Requisite: MAT 122 - College Trigonometry: GT-MA1 OR MAT 166 - Pre-Calculus: GT-MA1

MAT 202 - Calculus II: GT-MA1 (5 Cr.)

- Pre-Requisite: MAT 201 - Calculus I: GT-MA1

PHY 211 - Physics: Calculus-Based I with Lab: GT-SC1* (5 Cr.)

- Pre-Requisite: MAT 201 - Calculus I: GT-MA1

PHY 212 - Physics: Calculus-Based II with Lab: GT-SC1* (5 Cr.)

- Pre-Requisite: MAT 201 - Calculus I: GT-MA1
- Pre-Requisite: PHY 211 - Physics: Calculus-Based I with Lab: GT-SC1

MAT 203 - Calculus III OR MAT 204 - Calculus III w/Engineering Applications

- Pre-Requisite: MAT 202 - Calculus II: GT-MA1

PHY 213 - Physics III: Calculus-Based Modern Physics

- Pre-Requisite: PHY 212 - Physics: Calculus-Based II with Lab: GT-SC1

MAT 265 - Differential Equations OR MAT 261 - Differential Equations with Engineering Applications OR MAT 266 D

- Pre-Requisite: MAT 203 - Calculus III OR MAT 204 - Calculus III w/Engineering Applications
- Pre-Requisite: MAT 204 - Calculus III with Engineering Applications: GT-MA1

CHE 112 - General College Chemistry II GT-SC1 OR CSC 160 - Computer Science I*

- Pre-Requisite: For CHE 112: CHE 111 and MAT 121
- Pre-Requisite: For CSC 160: CSC 116 or CSC 119 and MAT 055/099 or higher

Program Outcomes

- Be prepared to successfully transfer to a Bachelor's program in physics.
- Discuss and communicate foundational theories of physics and the evidence for these theories.
- Use appropriate mathematical models to describe physical phenomena.
- Perform experiments to reinforce physical models and discuss the limitations of these experiments.

Notes

- *This course requires college level readiness as measured by Accuplacer, ACT, or SAT scores; approved high school course work that is less than five years old; or successful completion of appropriate college-readiness course.
- AAA 101 – College 101: Student Experience is required for all new college students seeking degrees or transfer.
- Course availability is subject to change.
- Follow the Recommended Course Sequence on the following pages of this document.

- In order to meet program requirements, students registered for ENG 121 or ENG 131 must also register for CCR 094 unless they can demonstrate otherwise meeting the CCR 094 standard through assessment testing, prior college coursework, or recent High School coursework. See an Advisor for details.
- Recommended courses are listed above for certain electives; consult with the Academic Advising Office (advising@arapahoe.edu or 303.797.5664) or the Physics Department for additional elective recommendations.
- Refer to 21/22 catalog for specific requirements and important information about this degree.
- Students planning to transfer to Fort Lewis College or University of Colorado - Colorado Springs must take both CSC 160 and CHE 112.
- Students planning to transfer to University of Colorado Boulder must take CHE 112 (not CSC 160).
- Students planning to transfer to University of Northern Colorado must take CSC 160 (not CHE 112).
- The Colorado Department of Higher Education website has additional information about this statewide agreement.

Graduation Requirements

- All courses required for this degree must be completed with a "C" or better to be considered for transfer to another Colorado institution. Transferability of courses to colleges or universities outside of Colorado is determined by the receiving institution.
- To graduate, students must apply for graduation (form available at www.arapahoe.edu/departments-and-programs/graduation) by the deadline and meet all degree requirements.

RECOMMENDED COURSE SEQUENCE FULL-TIME TRACK

Year 1: Fall	Credits	Course
	3	Arts / Humanities GT-AH1-AH4 ~Recommended Arts / Humanities Course(s)~ ART 110 - Art Appreciation GT-AH1* (3 Cr.) HUM 115 - World Mythology: GT-AH2* (3 Cr.) LIT 115 - Introduction to Literature I: GT-AH2* (3 Cr.) MUS 120 - Music Appreciation: GT-AH1* (3 Cr.) PHI 112 - Ethics: GT-AH3* (3 Cr.) PHI 218 - Environmental Ethics: GT-AH3* (3 Cr.) SPA 211 - Spanish Language III: GT-AH4 (3 Cr.)
	5	CHE 111 - General College Chemistry I with Lab: GT-SC1 (5 Cr.)
	3	ENG 121 - English Composition I: GT-CO1 (3 Cr.)
	5	MAT 201 - Calculus I: GT-MA1 (5 Cr.)
Year 1: Spring	Credits	Course
	3	Arts / Humanities GT-AH1-AH4 ~Recommended Arts / Humanities Course(s)~ ART 112 - Art History Renaissance to Modern: GT-AH1* (3 Cr.) HUM 115 - World Mythology: GT-AH2* (3 Cr.) HUM 121 - Humanities: Early Civilization: GT-AH2* (3 Cr.) MUS 125 - History of Jazz: GT-AH1* (3 Cr.) PHI 111 - Introduction to Philosophy: GT-AH3* (3 Cr.) PHI 113 - Logic: GT-AH3* (3 Cr.) PHI 114 - Comparative Religions: GT-AH3* (3 Cr.)
	3	ENG 122 - English Composition II: GT-CO2 (3 Cr.)
	5	MAT 202 - Calculus II: GT-MA1 (5 Cr.)
	5	PHY 211 - Physics: Calculus-Based I with Lab: GT-SC1 (5 Cr.)
Year 2: Fall	Credits	Course
	4-5	CHE 112 - General College Chemistry II GT-SC1 OR CSC 160 - Computer Science I ~Recommended Course(s)~ CSC 160 - Computer Science I* (4 Cr.)
	3	History GT-HI1 ~Recommended History Course(s)~ HIS 101 - Western Civilization: Antiquity-1650: GT-HI1* (3 Cr.) HIS 102 - Western Civilization: 1650-Present: GT-HI1* (3 Cr.) HIS 111 - The World: Antiquity-1500: GT-HI1* (3 Cr.) HIS 112 - The World: 1500-Present: GT-HI1* (3 Cr.) HIS 121 - U.S. History to Reconstruction: GT-HI1* (3 Cr.) HIS 225 - Colorado History: GT-HI1* (3 Cr.) HIS 247 - 20th Century World History: GT-HI1* (3 Cr.)
	4-5	MAT 203 - Calculus III OR MAT 204 - Calculus III w/Engineering Applications ~Recommended Math Course(s)~ MAT 203 - Calculus III: GT-MA1 (4 Cr.)
	5	PHY 212 - Physics: Calculus-Based II with Lab: GT-SC1 (5 Cr.)

Year 2: Spring	Credits	Course
	3	Arts / Humanities GT-AH1-AH4 ~Recommended Arts / Humanities Course(s)~ ART 110 - Art Appreciation GT-AH1* (3 Cr.) HUM 123 - Humanities: Modern World: GT-AH2* (3 Cr.) MUS 120 - Music Appreciation: GT-AH1* (3 Cr.) MUS 125 - History of Jazz: GT-AH1* (3 Cr.) PHI 112 - Ethics: GT-AH3* (3 Cr.) PHI 218 - Environmental Ethics: GT-AH3* (3 Cr.) SPA 212 - Spanish Language IV: GT-AH4 (3 Cr.)
	3-4	MAT 265 - Differential Equations OR MAT 261 - Differential Equations with Engineering Applications ~Recommended Math Course(s)~ MAT 265 - Differential Equations: GT-MA1 (3 Cr.)
	3	PHY 213 - Physics III: Calculus-Based Modern Physics
	3	Social / Behavioral Science GT-SS1-SS3 ~Recommended Social / Behavioral Science Course(s)~ ANT 107 - Introduction to Archaeology: GT-SS3* (3 Cr.) COM 220 - Intercultural Communication: GT-SS3* (3 Cr.) ECO 201 - Principles of Macroeconomics: GT-SS1* (3 Cr.) GEO 105 - World Regional Geography: GT-SS2* (3 Cr.) PSY 101 - General Psychology I: GT-SS3* (3 Cr.) PSY 102 - General Psychology II: GT-SS3* (3 Cr.) SOC 207 - Environmental Sociology: GT-SS3* (3 Cr.)

RECOMMENDED COURSE SEQUENCE PART-TIME TRACK

Year 1: Fall	Credits	Course
	3	ENG 121 - English Composition I: GT-CO1 (3 Cr.)
	5	MAT 201 - Calculus I: GT-MA1 (5 Cr.)
Year 1: Spring	Credits	Course
	3	Arts / Humanities GT-AH1-AH4 ~Recommended Arts / Humanities Course(s)~ ART 110 - Art Appreciation GT-AH1* (3 Cr.) HUM 115 - World Mythology: GT-AH2* (3 Cr.) LIT 115 - Introduction to Literature I: GT-AH2* (3 Cr.) MUS 120 - Music Appreciation: GT-AH1* (3 Cr.) PHI 112 - Ethics: GT-AH3* (3 Cr.) PHI 218 - Environmental Ethics: GT-AH3* (3 Cr.) SPA 211 - Spanish Language III: GT-AH4 (3 Cr.)
	5	PHY 211 - Physics: Calculus-Based I with Lab: GT-SC1 (5 Cr.)
Year 1: Summer	Credits	Course
	3	Arts / Humanities GT-AH1-AH4 ~Recommended Arts / Humanities Course(s)~ ART 112 - Art History Renaissance to Modern: GT-AH1* (3 Cr.) HUM 115 - World Mythology: GT-AH2* (3 Cr.) HUM 121 - Humanities: Early Civilization: GT-AH2* (3 Cr.) MUS 125 - History of Jazz: GT-AH1* (3 Cr.) PHI 111 - Introduction to Philosophy: GT-AH3* (3 Cr.) PHI 113 - Logic: GT-AH3* (3 Cr.) PHI 114 - Comparative Religions: GT-AH3* (3 Cr.)
	3	History GT-HI1 ~Recommended History Course(s)~ HIS 101 - Western Civilization: Antiquity-1650: GT-HI1* (3 Cr.) HIS 102 - Western Civilization: 1650-Present: GT-HI1* (3 Cr.) HIS 111 - The World: Antiquity-1500: GT-HI1* (3 Cr.) HIS 112 - The World: 1500-Present: GT-HI1* (3 Cr.) HIS 121 - U.S. History to Reconstruction: GT-HI1* (3 Cr.) HIS 225 - Colorado History: GT-HI1* (3 Cr.) HIS 247 - 20th Century World History: GT-HI1* (3 Cr.)
Year 2: Fall	Credits	Course
	3	ENG 122 - English Composition II: GT-CO2 (3 Cr.)
	5	MAT 202 - Calculus II: GT-MA1 (5 Cr.)
Year 2: Spring	Credits	Course
	5	CHE 111 - General College Chemistry I with Lab: GT-SC1 (5 Cr.)
	5	PHY 212 - Physics: Calculus-Based II with Lab: GT-SC1 (5 Cr.)

Year 2: Summer	Credits	Course
	3	Arts / Humanities GT-AH1-AH4 ~Recommended Arts / Humanities Course(s)~ ART 110 - Art Appreciation GT-AH1* (3 Cr.) HUM 123 - Humanities: Modern World: GT-AH2* (3 Cr.) MUS 120 - Music Appreciation: GT-AH1* (3 Cr.) MUS 125 - History of Jazz: GT-AH1* (3 Cr.) PHI 112 - Ethics: GT-AH3* (3 Cr.) PHI 218 - Environmental Ethics: GT-AH3* (3 Cr.) SPA 212 - Spanish Language IV: GT-AH4 (3 Cr.)
	3	Social / Behavioral Science GT-SS1-SS3 ~Recommended Social / Behavioral Science Course(s)~ ANT 107 - Introduction to Archaeology: GT-SS3* (3 Cr.) COM 220 - Intercultural Communication: GT-SS3* (3 Cr.) ECO 201 - Principles of Macroeconomics: GT-SS1* (3 Cr.) GEO 105 - World Regional Geography: GT-SS2* (3 Cr.) PSY 101 - General Psychology I: GT-SS3* (3 Cr.) PSY 102 - General Psychology II: GT-SS3* (3 Cr.) SOC 207 - Environmental Sociology: GT-SS3* (3 Cr.)
Year 3: Fall	Credits	Course
	4-5	CHE 112 - General College Chemistry II GT-SC1 OR CSC 160 - Computer Science I ~Recommended Course(s)~ CSC 160 - Computer Science I* (4 Cr.)
	4-5	MAT 203 - Calculus III OR MAT 204 - Calculus III w/Engineering Applications ~Recommended Math Course(s)~ MAT 203 - Calculus III: GT-MA1 (4 Cr.)
Year 3: Spring	Credits	Course
	3-4	MAT 265 - Differential Equations OR MAT 261 - Differential Equations with Engineering Applications ~Recommended Math Course(s)~ MAT 265 - Differential Equations: GT-MA1 (3 Cr.)
	3	PHY 213 - Physics III: Calculus-Based Modern Physics