

## 2 + 2 Joint Articulation Transfer Agreement

### Bachelor of Science in Chemistry (ACS Certified Emphasis)

#### Colorado State University – Pueblo And Red Rocks Community College

<b>B.S. Requirements at CSU-Pueblo</b>			<b>A.S. Requirements at RRCC</b>		
<b>Lower Division General Education Requirements</b>			<b>Equivalent Courses at RRCC</b>		
Course #	Course Title	Credits	Course #	Course Title	Credits
ENG 101	Composition I	3	ENG 121	English Composition I	3
ENG 102	Composition II	3	ENG 122	English Composition II	3
Humanities	Select from statewide Gen Ed Core	9	Humanities	Select from statewide Gen Ed Core	6
Social Science	Select from statewide Gen Ed Core	6	Social Science	Select from statewide Gen Ed Core	6
History	Select from Statewide Gen Ed Core	3	History	Select from Statewide Gen Ed Core	3
MATH 126	Calculus & Analytic Geometry I	5	MAT 201	Calculus I	5
Physical and Life Sciences			Physical and Life Sciences		
CHEM 121/L and CHEM 122/L	General Chemistry I and General Chemistry II	5 5	CHE 111 and CHE 112	General College Chemistry I and General College Chemistry II	5 5
<b>Subtotal</b>		<b>39</b>	<b>Subtotal</b>		<b>36</b>
<b>Required Chemistry Core Courses</b>			<b>Equivalent Courses at RRCC</b>		
CHEM 121/L	General Chemistry I/Lab	(5)	CHE 111	General College Chemistry I	(5)
CHEM 122/L	General Chemistry II/Lab	(5)	CHE 112	General College Chemistry II	(5)
CHEM 221/L	Inorganic Chemistry/Lab	3			
CHEM 301/L	Organic Chemistry I/Lab	5	*CHE 211	*Organic Chemistry I *course is considered academically equivalent, but cannot be counted toward Upper Division credit	5
CHEM 302/L	Organic Chemistry II/Lab	5	*CHE 212	*Organic Chemistry II *course is considered academically equivalent, but cannot be counted toward Upper Division credit	5
CHEM 317/L	Quantitative Analysis/Lab	5			
CHEM 321	Physical Chemistry I	3			
CHEM 322	Physical Chemistry II	3			
CHEM 419/L	Instrumental Analysis/Lab	5			
CHEM 493	Seminar	1			
<b>Subtotal</b>		<b>30</b>	<b>Subtotal</b>		<b>10</b>
<b>ACS Emphasis</b>			<b>Equivalent Courses at RRCC</b>		
CHEM 323	Experimental Physical Chemistry	2			
CHEM 411	Biochemistry I	3			
CHEM 421	Advanced Inorganic Chemistry	3			
CHEM 492	Research	1			
Electives	Approved Chemistry Electives	6			

<b>Subtotal</b>		<b>15</b>	<b>Subtotal</b>		
<b>Other Required Courses</b>			<b>Equivalent Courses at RRCC</b>		
MATH 126	Calculus & Analytic Geometry I	(5)	MAT 201	Calculus I	(5)
MATH 224	Calculus & Analytic Geometry II	5	MAT 202	Calculus II	5
PHYS 221/L	General Physics I/Lab	5	PHY 211	Physics: Calculus-based I	5
PHYS 222/L	General Physics II/Lab	5	PHY 212	Physics: Calculus-based II	5
<b>Subtotal</b>		<b>15</b>	<b>Subtotal</b>		<b>15</b>
<b>Approved Minor</b>					
Minor	Choose advisor approved minor	20			
<b>Subtotal</b>		<b>20</b>			
<b>Additional Degree Requirements</b>					
Free Elective	May be any academic discipline	1			
<b>Subtotal</b>		<b>1</b>	<b>Subtotal</b>		
<b>Total Credits for A.S.</b>					<b>61</b>
<b>Total Transfer Credit Accepted for A.S.</b>					<b>60</b>
<b>Total Additional Credit Required for B.S.</b>					<b>60</b>
<b>Total B.S. Degree Requirements</b>					<b>120</b>

Students who successfully complete this program as specified are eligible to apply for a *Destination CSU-Pueblo* scholarship.

This articulation transfer agreement replaces all previous agreements between RRCC and CSU-Pueblo in Bachelor of Science in Chemistry (ASC Certified Emphasis). This agreement will be reviewed annually and revised (if necessary) as mutually agreed.

cam: 12/03/09  
revised: 06/06/10  
revised 06/14/10