

## 2 + 2 Joint Articulation Transfer Agreement

### Bachelor of Science in Chemistry (Biochemistry Emphasis)

#### Colorado State University – Pueblo And Colorado Northwestern Community College

<b>B.S. Requirements at CSU-Pueblo</b>			<b>A.S. Requirements at CNCC</b>		
<b>Lower Division General Education Requirements</b>			<b>Equivalent Courses at CNCC</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
			*COM 115	*Public Speaking <b>*3 credits carried over to the Free Electives Section</b>	(3)
Humanities	Select from statewide Gen Ed Core	9	Humanities	Select from statewide Gen Ed Core	9
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>39</b>
<b>Required Chemistry Core Courses</b>			<b>Equivalent Courses at CNCC</b>		
CHEM 121/L	General Chemistry I/Lab	(5)	CHE 111	General College Chemistry I (see statewide Gen Ed Core)	(5)
CHEM 122/L	General Chemistry II/Lab	(5)	CHE 112	General College Chemistry II (see statewide Gen Ed Core)	(5)
CHEM 221/L	Inorganic Chemistry/Lab	3			
CHEM 301/L	Organic Chemistry I/Lab	5			
CHEM 302/L	Organic Chemistry II/Lab	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>0</b>
<b>Biochemistry Emphasis Requirements</b>			<b>Equivalent Courses at CNCC</b>		
CHEM 411	Biochemistry I	3			
CHEM 412/L	Biochemistry II	5			
Elective	Approved Chemistry Elective	3			
<b>Subtotal</b>		<b>11</b>	<b>Subtotal</b>		
<b>Additional Required Courses</b>			<b>Equivalent Courses at CNCC</b>		
BIOL 181/L	College Biology I/Oranismal Biol/Lab	4	BIO 111	General College Biology I	5
BIOL 182/L	College Biology II/Cellular Biol/Lab	4	BIO 112	General College Biology Ii	5
BIOL 301/L	General Microbiology	5			
BIOL 350	Mendelian & Population Genetics	2			

BIOL 351/L	Molecular Biology & Genetics	4			
BIOL 412	Cellular Biology	4			
MATH 126	Calculus & Analytic Geometry I	(5)	MAT 201	Calculus I (see statewide Gen Ed Core)	(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
Free Electives	May be any academic discipline	2	*COM 115	*Public Speaking *2 credits allowed in this section	3
<b>Subtotal</b>		<b>40</b>	<b>Subtotal</b>		<b>23</b>
<b>Total Credits for A.S.</b>					<b>62</b>
<b>Total Transfer Credit Accepted for A.S.</b>					<b>60</b>
<b>Total Additional Credit Required for B.S.</b>					<b>61</b>
<b>Total B.S. Degree Requirements</b>					<b>121</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 CNCC and CSU-Pueblo in Bachelor of Science in Chemistry (Biochemistry Emphasis). This agreement will be reviewed annually and revised (if necessary) as mutually agreed.

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