2 + 2 Joint Articulation Transfer Agreement

Bachelor of Science in Physics (General Physics Emphasis)

Colorado State University – Pueblo
And
Front Range Community College

B.S. Requirements at CSU-Pueblo			**A.S. Requirements at FRCC**		
Lower Division General Education Requirements			**Equivalent Courses at FRCC**		
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 *See Open Electives Section	(3)
Humanities	Select from statewide Gen Ed Core	9	Humanities	Select from statewide Gen Ed Core	9
Social Science		6	Social Science		6
History	Select from Statewide Gen Ed Core	3	History	Select from Statewide Gen Ed Core	3
MATH 126	Calculus & Analytic Geometry	5	MAT 201	Calculus I	5
Physical and Life Sciences CHEM 121/L and CHEM 122/L	 General Chemistry I and General Chemistry II	 5 5	Physical and Life Sciences CHE 111 and CHE 112	 General College Chemistry I and General College Chemistry II	 5 5
Subtotal		**39**	**Subtotal**		**39**
Required Physics Core Courses			**Equivalent Courses at FRCC**		
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
PHYS 301	Theoretical Mechanics	4			
PHYS 321	Thermodynamics	3			
PHYS 322	Advanced Laboratory – Heat	1			
PHYS 323/L	General Physics III/Lab	5			
PHYS 341	Optics	3			
PHYS 342	Advanced Laboratory – Optics	1			
PHYS 431	Electricity & Magnetism	4			
PHYS 432	Adv Lab Electricity & Magnetism	1			
PHYS 441	Quantum Mechanics	4			
PHYS 480	Practicum in Lab Instruction	1			
PHYS 492	Research	1			
PHYS 493	Seminar	1			
PHYS 499	Thesis Research	1			
Subtotal		**40**	**Subtotal**		**10**
Additional Major Requirements			**Equivalent Courses at FRCC**		
CHEM 121/L	General Chemistry I/Lab	(5)	CHE 111	General College Chemistry I (see Gen Ed Core)	(5)
CHEM 122/L	General Chemistry II/Lab	(5)	CHE 112	General College Chemistry II (see Gen Ed Core)	(5)
MATH 242 or	MATLAB Programming or	4			

EN 103	Problem Solving for Engineers	3			
MATH 126	Calculus & Analytic Geometry I	(5)	MAT 201	Calculus I (see Gen Ed Core)	(5)
MATH 207	Matrix & Vector Algebra w/App	2			
MATH 224	Calculus & Analytic Geometry II	5	MAT 202	Calculus II	5
MATH 325	Intermediate Calculus	3			
MATH 337	Differential Equations I	3			
MATH 338	Differential Equations II	3			
Elective	Approved Upper Division Math Elective	3-4			
Subtotal		**22-24**	**Subtotal**		**5**
Additional Degree Requirements					
Open Electives	May be any Academic Discipline	17-19	*COM 115	*Public Speaking Choose additional credit from the A.S. approved list to complete A.S. Degree	3 3
Subtotal		**17-19**	**Subtotal**		**6**
Total Credits for A.S.					**60**
Total Transfer Credit Accepted for A.S.					**60**
Total Additional Credit Required for B.S.					**60**
Total B.S. Degree Requirements					**120**

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 FRCC and CSU-Pueblo in Bachelor of Science in Physics (General Physics Emphasis). This agreement will be reviewed annually and revised (if necessary) as mutually agreed.

cam: 11/13/09