

## 2+2 Mathematics Industrial Transfer Agreement with Shepherd U and Hagerstown CC

Hagerstown Community College Course				Shepherd University Equivalent Course			
YEAR ONE				YEAR ONE			
Fall Course ID	Course Title	Cred.	CORE	Fall Course ID	Course Title	Cred.	CORE
ENG 101	English Composition	3		ENGL 101	Writing and Rhetoric I	3	T1-ENG
MAT 203	Calculus I	4		MATH 207	Calculus I	4	T1-MA
HIS 201	American History I	3		HIST 201	History of the U.S. to 1865	3	T2-HM
POL 101	American Government	3		PSCI 101	American Federal Government	3	
ECO 201	Macroeconomic Principles	3		ECON 205	Principles of Macroeconomics (CK)	3	T2-SO
<b>FALL TOTAL</b>	<b>YEAR 1</b>	<b>16 hrs</b>		<b>FALL TOTAL</b>	<b>YEAR 1</b>	<b>16 hrs</b>	
Spring Course ID	Course Title	Cred.	CORE	Spring Course ID	Course Title	Cred.	CORE
ENG 102	Composition and Literature	3		ENGL 102	Writing and Rhetoric II	3	T1-ENG
MAT 204	Calculus II	4		MATH 208	Calculus II	4	
HIS 202	American History II	3		HIST 202	History of the U.S. 1865 to Present	3	T2-HM
POL 102	State and Local Government	3		PSCI 300	State and Local Government	3	T2-SO
Gen ed	Arts/Humanities	3		Elective		3	
<b>SPRING TOTAL</b>	<b>YEAR 1</b>	<b>16 hrs</b>		<b>SPRING TOTAL</b>	<b>YEAR 1</b>	<b>16 hrs</b>	
YEAR TWO				YEAR TWO			
Fall Course ID	Course Title	Cred.	CORE	Fall Course ID	Course Title	Cred.	CORE
PHY 203	Principles of Physics I	5		PHYS 221/221 L	General Physics I w/ Lab Elective 1cr	4+1	T1-LS
MAT 207	Discrete Math	4		MATH 254	Discrete Mathematics Elective 1cr	3+1	
ART 101	Intro to Visual Arts	3	AR/HM	ART 103	Introduction to Visual Art (GL)	3	T2-AR
HIS 102	History of Civilization II	3		HIST 102	History of Civilization: Early Modern	3	T1-HIS
GEO 105	World Regional Geography	3	DIV	GEOG 202	World Regions (GL)	3	T2-SO
<b>FALL TOTAL</b>	<b>YEAR 2</b>	<b>18 hrs</b>		<b>FALL TOTAL</b>	<b>YEAR 2</b>	<b>18 hrs</b>	
Spring Course ID	Course Title	Cred.	CORE	Spring Course ID	Course Title	Cred.	CORE
PHY 204	Principles of Physics II	5		PHYS 222/222L	General Physics II w/ Lab Elective 1cr	4	T1-LS
MAT 205	Calculus III	4		MATH 309	Calculus III	4	
SPD 103	Public Speaking	3		COMM 202	Fundamentals of Speech (MD)	3	T2-HM
EGR 103	Intro to Engineering	3		ENGR 101	Engineering I	3	
EGR 203	Strength and Materials	3		ENGR 243*	Engineering Mechanics of Materials	3	
<b>SPRING TOTAL</b>	<b>YEAR 2</b>	<b>18 hrs</b>		<b>SPRING TOTAL</b>	<b>YEAR 2</b>	<b>18 hrs</b>	<b>68 hrs</b>



### Shepherd University Courses

YEAR THREE				YEAR THREE			
Fall Course ID	Shepherd Course Title	Cred.	CORE	Spring Course ID	Shepherd Course Title	Cred.	CORE
MATH 300 +	Math Elective	3		MATH 300+	Math Elective	3	
MATH 314	Statistics	3	T1-MA	MATH 321	Probability and Statistics	3	
Wellness	GSPE 210/FACS 120/NURS 310	3	T2-WE	MATH 318	Numerical Analysis	3	
MATH 307	Introduction to Linear Algebra	3		MATH 329	Mathematical Modeling	3	
MATH 310	Differential Equations	4		ENGR 102	Engineering II	3	
<b>FALL TOTAL</b>	<b>YEAR 3</b>	<b>16 hrs</b>		<b>SPRING TOTAL</b>	<b>YEAR 3</b>	<b>15 hrs</b>	
YEAR FOUR				YEAR FOUR			
Fall Course ID	Shepherd Course Title	Cred.	CORE	Spring Course ID	Shepherd Course Title	Cred.	CORE
MATH 489	Mathematics Capstone I	1	T2-WM	MATH 490	Mathematics Capstone Project II	2	T3-CP
ENGR 221	Introduction to Electrical Engineering	3		MATH 410	Advanced Calculus	3	
MATH 354	Operations Research	3		MATH 409	Introduction to Complex Variables	3	
ENGR 301 or 351	Engineering Thermodynamics or Intro to Fluid Mechanics	3		ENGR 242	Engineering Dynamics	3	
ENGR 241	Engineering Statics	3		ENGR 200+ *	Course for Industrial Concentration	3	
ENGR 200+*	Course for Industrial Concentration	3		ENGR 200+*	Course for Industrial Concentration	3	
<b>FALL TOTAL</b>	<b>YEAR 4</b>	<b>16 hrs</b>		<b>SPRING TOTAL</b>		<b>17 hrs</b>	
			<b>TOTAL</b>	<b>CREDITS</b>	<b>FOR ALL FOUR YEARS</b>	<b>132</b>	

\*Electives in Concentration

\*\*Concentration requirements

Approved By: Mary J.C. Hendrix 5-14-18  
 Mary J.C. Hendrix, President Date  
 Shepherd University

Approved By: Carol A. Rothstein 5-14-18  
 Carol A. Rothstein, Acting Chief Academic Officer Date  
 on behalf of C. David Warner, Interim President  
 Hagerstown Community College