DELAWARE TECHNICAL AND COMMUNITY COLLEGE
and
UNIVERSITY OF DELAWARE

PROGRAM ARTICULATION AGREEMENT

Associate Degree
Science Education: Chemistry/Physics

Baccalaureate Degree
B.A. Physics Education

2012 through 2017

ASSOCIATE-BACCALAUREATE PROGRAM ARTICULATION AGREEMENT

between

Delaware Technical and Community College
and
University of Delaware

for
Science Education: Chemistry/Physics/B.A. Physics Education

AGREEMENT

WHEREAS Delaware Technical and Community College and the University of Delaware are committed to expanding educational opportunities for the citizens of the State of Delaware, and

WHEREAS the two institutions are committed to providing a smooth transition for students wishing to earn an associate degree and a baccalaureate degree, and

WHEREAS the intent of the two institutions is to avoid duplication of curricula where appropriate within articulated programs of studies, and

WHEREAS the two institutions better serve the educational growth of students and the economic development of the community through cooperative educational planning and optimal utilization of community resources,

BE IT HEREWITH RESOLVED that this agreement commits the partners to full support of an articulation process between similar academic programs offered by the two institutions.

PROVISIONS OF THE AGREEMENT

1. This program articulation agreement applies to Delaware Tech's Associate Degree Program in Science Education: Chemistry/Physics and the University of Delaware's Bachelor of Arts Degree Program in Physics Education.

2. The institutions agree to follow the joint program curriculum and course by course articulation delineated in this document.

3. Both educational institutions will cooperate toward developing, disseminating, and presenting the articulated program information to students.

4. Graduates of the Delaware Tech program who have completed the associate degree with a cumulative grade point average of 2.5 or higher will automatically be accepted into the baccalaureate program at the University of Delaware. Those with a cumulative grade point average between 2.0 and 2.5 will be considered for admission on a space available basis.

5. All articulated course credits earned with a C or better will be accepted for transfer according to the program matrix.

6. Students intending to transfer should complete the admissions application for the University of Delaware following the third semester of their associate degree program or upon completion of 48 credits.

7. Students are subject to all the policies and procedures of both institutions.

8. Students are subject to all specific policies pertaining to students admitted to the Bachelor of Arts Degree Program in Physics Education.

9. This articulation agreement is based on the present curricula contained in this document and it is effective for a five-year period from 2012 to 2017.

10. Both institutions at any time may initiate changes to this articulation agreement. Both institutions reserve the right to modify the programs as deemed necessary and agree to inform the appropriate individuals of said changes. The senior institution will make a good faith effort to honor the articulation agreement in effect at the time a student is admitted to the Science Education: Chemistry/Physics Associate Degree Program.

ASSOCIATE/BACHELOR'S CONNECTED CURRICULUM

Institutions:	Delaware Tech	and	University of Delaware
Programs:	Science Education: Chemistry/Physics	and	B.A. Physics Education

Delaware Tech		**Equivalency Approval Signature**		**University of Delaware**	
Course	Credits	DTCC	UD	Course	Credits
ECO 111 Macroeconomics or ECO 122 Microeconomics or SOC 111 Sociology I	3	Matrix	Matrix	ECON 152 Intro to Macroeconomics or ECON 151 Intro to Microeconomics or SOCI 201 Intro to Sociology (Social/Behavioral Sciences – Group C)	3
ENG 121 Composition	3	Matrix	Matrix	ENGL 110 Critical Reading and Writing	3
ENG 122 Technical Writing/ Communication^	3	Matrix	Matrix	ENGL 410 Technical Writing (Second Writing Course)	3
HIS 111 U. S. History: Pre-Civil War **or** HIS 112 U. S. History: Post-Civil War	3	Matrix	Matrix	HIST 205 U. S. History I **or** HIST 206 U. S. History II (History/Cultural Change - Group B)	3
PSY 121 General Psychology	3	Matrix	Matrix	PSYC 100 General Psychology (Social/Behavioral Sciences – Group C)	3
PSY 127 Human Development	3	Matrix	Matrix	HDFS 201 Life Span Development (Social/Behavioral Sciences – Group C)	3
SPA 136 Spanish Communication I	4	Matrix	Matrix	SPAN 105 Elementary Spanish I (Foreign Language)	4
MAT 281 Calculus I	4	Matrix	Matrix	MATH 241 Analytic Geometry and Calculus A	4
MAT 282 Calculus II	4	Matrix	Matrix	MATH 242 Analytic Geometry and Calculus B	4
Credit Subtotal	**30**			**Credit Subtotal**	**30**

^ENG 122 must be taken in last semester of associate degree program to be accepted for second writing requirement.

ASSOCIATE/BACHELOR'S CONNECTED CURRICULUM

Institutions:	Delaware Tech	and	University of Delaware
Programs:	Science Education: Chemistry/Physics	and	B.A. Physics Education

Delaware Tech		**Equivalency Approval Signature**		**University of Delaware**	
Course	Credits	DTCC	UD	Course	Credits
CHM 150 Chemical Principles I	5	Matrix	Matrix	CHEM 103 General Chemistry CHEM 166T Transfer Elective	4 1
CHM 151 Chemical Principles II	5	Matrix	Matrix	CHEM 104 General Chemistry CHEM 166T Transfer Elective	4 1
EDC 1XX Nature of Science*	1			EDUC 166T Transfer Elective	1
EDC 100 Professional Prep: Praxis I	1			EDUC 166T Transfer Elective	1
EDC 260 Educational Psychology	3	Matrix	Matrix	EDUC 413 Adolescent Development & Educational Psychology	4
MAT 283 Calculus III (Major Elective)	4	Matrix	Matrix	MAT 243 Analytical Geometry & Calculus C	4
MAT 291 Ordinary Differential Equations (Major Elective)	4	Matrix	Matrix	MATH 302 Ordinary Differential Equations	4
PHY 281 Physics I with Calculus	4	Matrix	Matrix	PHYS 207 Fundamentals of Physics I	4
PHY 282 Physics II with Calculus	4			PHYS 208 Fundamentals of Physics II	4
Credit Subtotal	**31**			**Credit Subtotal**	**31**
Credit Total	**61**			**Credit Total**	**61**

*New course to be developed.

BACHELOR'S DEGREE COMPLETION CURRICULUM

Institutions: Delaware Tech and University of Delaware

Programs: Science Education: Chemistry/Physics and B.A. Physics Education

General Education			Professional Education		
Course	Title	Credits	Course	Title	Credits
	Foreign Language Courses	8	CISC 106	General Computer Science for Engineers	3
Group A	Group A Courses	9	PHYS 211	Oscillations and Waves	3
Group B	Group B Courses	6	PHYS 309	20th/21st Century Physics	3
			PHY XXX	300/400 Level Physics Electives	15
			EDUC 414	Teaching Exceptional Adolescents	3
			EDUC 419	Diversity in Secondary Education (Fulfills multicultural requirement)	3
			EDUC 400	Student Teaching	9
			EDUC 420	Reading in the Content Areas	1
			SCEN 491	Teaching Science in Secondary Schools	4
	Credit Subtotal	23		**Credit Subtotal**	44

CONNECTED DEGREE CURRICULUM

Suggested Course Sequence

ASSOCIATE DEGREE Science Education: Chemistry/Physics **DELAWARE TECHNICAL AND COMMUNITY COLLEGE**			BACHELOR'S DEGREE B.A. Physics Education **UNIVERSITY OF DELAWARE**		
FIRST SEMESTER (FALL)		CR	**FIFTH SEMESTER (SUMMER)**		CR
EDC 1XX	Nature of Science*	1		Group A Courses	6
ENG 121	Composition	3		Group B Course	3
PSY 121	General Psychology	3			**9**
MAT 281	Calculus I	4			
CHM 150	Chemical Principles I	5			
		16			
SECOND SEMESTER (SPRING)			**SIXTH SEMESTER (FALL)**		
PSY 127	Human Development	3	PHYS 211	Oscillations and Waves	3
PHY 281	Physics I with Calculus	4	PHYS XXX	Physics Elective (300/400 Level)	3
MAT 282	Calculus II	4	CISC 106	General Computer Science for Engineers	3
EDC 100	Professional Prep: Praxis I	1		Foreign Language Course	4
CHM 151	Chemical Principles II	5		Group A Course	3
		17			**16**
THIRD SEMESTER (FALL)			**SEVENTH SEMESTER (SPRING)**		
MAT 283	Calculus III (Major Elective)	4	PHYS XXX	Physics Electives (300/400 Level)	6
SPA 136	Spanish Communication I	4	PHYS 309	20TH/21ST Century Physics	3
PHY 282	Physics II with Calculus	4		Foreign Language Course	4
HIS 111 HIS 112	U. S. History: Pre-Civil War **or** U. S. History: Post-Civil War	3	EDUC 414	Teaching Exceptional Adolescents	3
		15			**16**
FOURTH SEMESTER (SPRING)			**EIGHTH SEMESTER (FALL)**		
ENG 122	Technical Writing/Communication^	3	PHYS XXX	Physics Electives (300/400 Level)	6
MAT 291	Ordinary Differential Equations (Major Elective)	4	EDUC 419	Diversity in Secondary Education	3
ECO 111 ECO 122 SOC 111	Macroeconomics **or** Microeconomics **or** Sociology I	3	SCEN 491	Teaching Science in Secondary Schools	4
EDC 260	Educational Psychology	3		Group B Course	3
			EDUC 420	Reading in the Content Areas	1
		13			**17**
			NINTH SEMESTER (SPRING)		
			EDUC 400	Student Teaching	**9**
*New course to be developed.			Students must pass PRAXIS I before taking methods courses and must have taken PRAXIS II before student teaching.		
^Course must be taken in last semester of associate degree program to be accepted for second writing requirement.			To be eligible to student teach, Physics Education students must have a GPA of 2.75 in their physics major and an overall GPA of 2.5.		
Total Credits		**61**	**Total Credits**		**67**

- The Bachelor of Arts degree in Physics Education requires a minimum of **124** credits.
- Course scheduling may vary by semester. See your advisor.
- RDG120, Critical Reading and Thinking, is a required DTCC course unless the student is exempt.

APPROVAL

This program articulation agreement is between Delaware Technical and Community College's Associate of Arts in Teaching Degree in Science Education: Chemistry/Physics and the University of Delaware's Bachelor of Arts Degree in Physics Education.

Approval is granted for a five-year term from 2012 through 2017 according to the terms of this agreement by:

Dr. Orlando J. George Jr., President
Delaware Technical and Community College

3/24/12
Date

Dr. Tom Apple, Provost, Chief Academic Officer
University of Delaware

3/9/12
Date

Dr. George H. Watson, Dean
College of Arts and Sciences
University of Delaware

27 Feb 2012
Date

George Hadjipan

Dr. George Hadjipanayis, Chair
Department of Physics & Astronomy
University of Delaware

2/21/2012
Date