

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

*New course to be developed.



CONNECTED DEGREE CURRICULUM

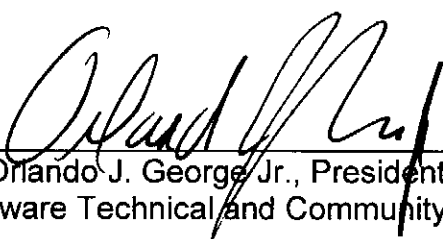
Suggested Course Sequence

ASSOCIATE DEGREE Science Education: Chemistry/Physics DELAWARE TECHNICAL AND COMMUNITY COLLEGE			BACHELOR'S DEGREE B.A. Physics Education UNIVERSITY OF DELAWARE		
FIRST SEMESTER (FALL)			FIFTH SEMESTER (SUMMER)		
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	20 TH /21 ST Century Physics	3
PHY 282	Physics II with Calculus	4		Foreign Language Course	4
HIS 111	U. S. History: Pre-Civil War or	3	EDUC 414	Teaching Exceptional Adolescents	3
HIS 112	U. S. History: Post-Civil War				
		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	Macroeconomics or	3	SCEN 491	Teaching Science in Secondary Schools	4
ECO 122	Microeconomics or				
SOC 111	Sociology I				
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
<ul style="list-style-type: none"> 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

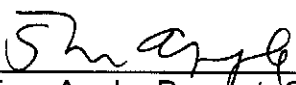
This program articulation agreement is between Delaware Technical and Community College's Associate of Arts in Teaching Degree in Science Education: Chemistry/Physics and the University of Delaware's Bachelor of Arts Degree in Physics Education.

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



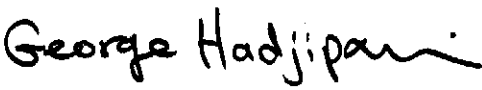
Dr. Tom Apple, Provost, Chief Academic Officer
University of Delaware

3/19/12
Date



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

27 Feb 2012
Date



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

2/21/2012
Date